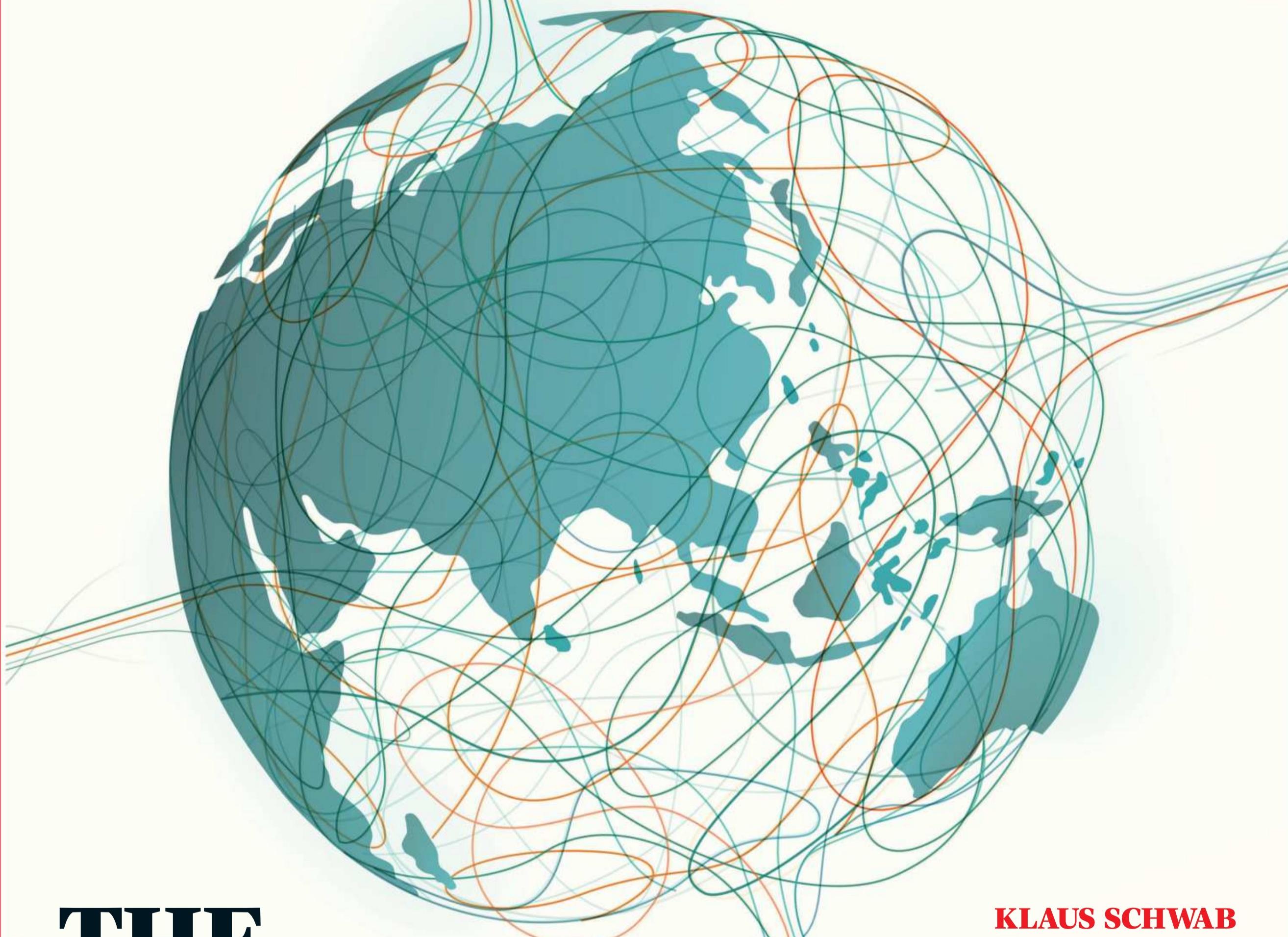


# TIME



## THE PATH FORWARD

**KLAUS SCHWAB**  
on the Asian century

**MALCOLM TURNBULL**  
on fairer taxes

**SADIQ KHAN**  
on greener cities

**N. CHANDRASEKARAN**  
on changing work

**MINOUCHE SHAFIK**  
on what we owe each other

**KAI-FU LEE**  
on our robotic future



A Theme Park for Security, Health & Wellbeing

# A Future of Endless Smiles, For All the People in the World.

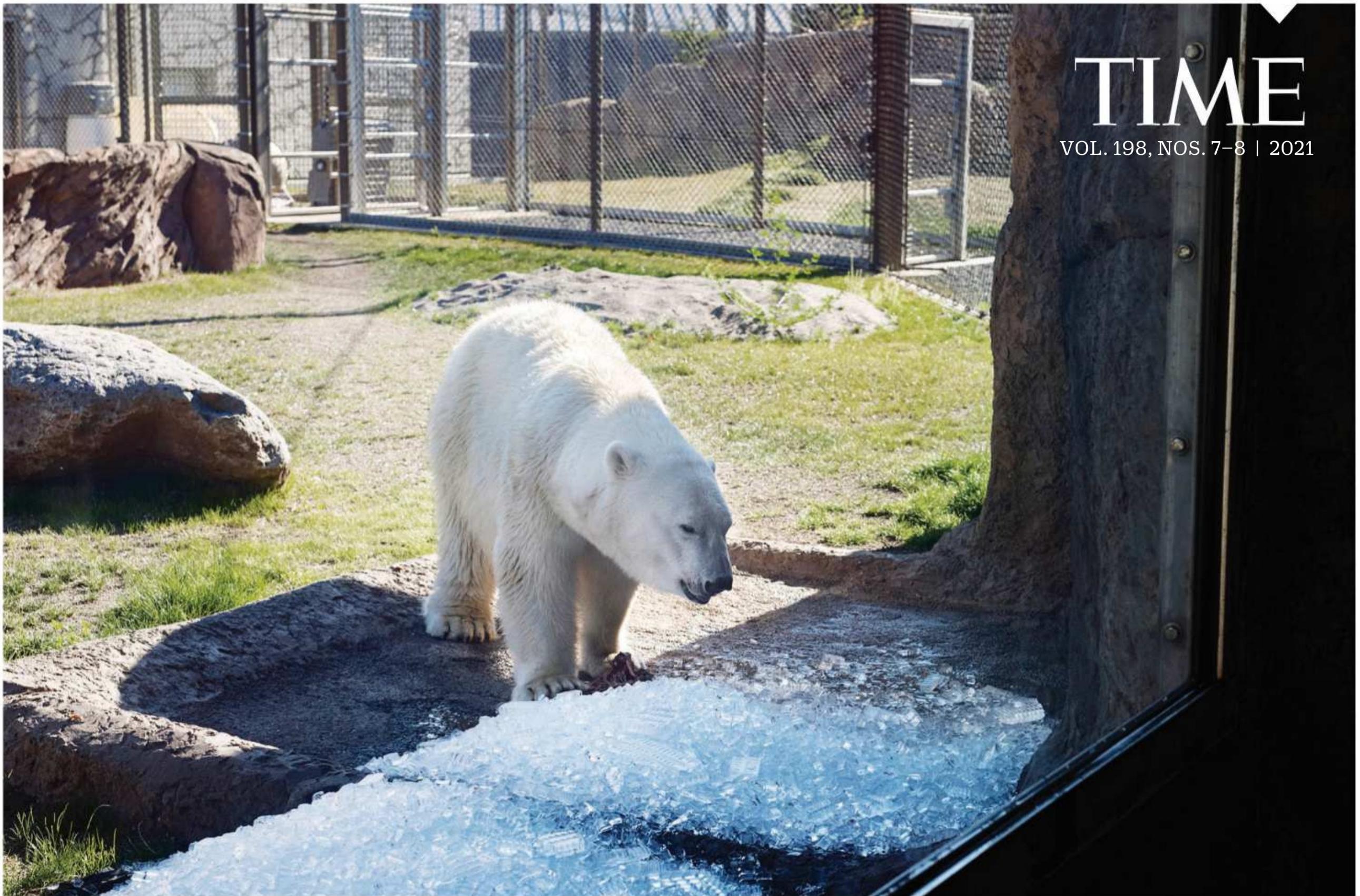
To create a society in which everyone can enjoy a healthy, prosperous life in their own way, we at SOMPO have analyzed "real data" obtained from the practical businesses with cutting-edge technologies and organized a "Real Data Platform" that generates new value for society.

We will continue evolving into a solution provider that goes beyond insurance with a mission to provide "A Theme Park for Security, Health & Wellbeing."



Please check our global branding activities here.  
[https://www.sompo-hd.com/en/company/brand/global\\_brand/](https://www.sompo-hd.com/en/company/brand/global_brand/)



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With portions of the world emerging from the pandemic, leaders aim to seize a critical moment. A World Economic Forum showcase **57****Time Off***What to watch, read, see and do***91 |** The 100 best young-adult books of all time, from *Little Women* and *The Catcher in the Rye* to *Holes* and *The Sun Is Also a Star*. With an introductory essay by Jason Reynolds**104 |** 6 Questions for tennis legend **Billie Jean King**

*Nora, a polar bear at Portland's Oregon Zoo, on June 28 during a record heat wave*

*Photograph by Adam Ferguson for TIME*

Elegance is an attitude

  
Simon Baker

# LONGINES



The Longines  
Master Collection

# From the Editor

## Faith in resilience

EARLIER THIS SUMMER, *TIME* SENIOR correspondent Justin Worland traveled to the Mahoning Valley, an area of northeast Ohio once teeming with manufacturing and now better known for plant closings. There he met William “Doug” Franklin, who grew up in the Valley, where his father worked in a local steel mill and his mother at a local auto supplier. Franklin himself worked 25 years at the now shuttered local General Motors facility. Today he’s the mayor of the town of Warren, focused on turning the area into an epicenter of electric-vehicle manufacturing. Even though he knows it’s not certain where the new jobs will emerge and whether they’ll equal the jobs he and his parents had, he’s optimistic.

“We know how to take a punch and how to recover; that’s just in our DNA,” Franklin told Justin.

Resilience is a theme running throughout this issue, and throughout this year in which the punches just keep coming. As the Delta variant extends its march across the U.S., correspondent Jamie Ducharme writes on the growing reality that COVID-19 may well be with us in some form as a “forever virus.” Searing images of damage wrought by extreme heat, in a portfolio by photographer Adam Ferguson, reinforce the grim findings of this month’s U.N. climate report that the planetary crisis is no longer a threat but our current reality. National political correspondent Molly Ball’s powerful profile of officer Mike Fanone, who nearly died defending the Capitol on Jan. 6, underscores the challenges that continue to face democracy. “In the aftermath of a national tragedy, we are supposed to come together,” Molly writes. “But what happens if we can’t agree? What if we’re too busy arguing?”

**THE ISSUE ALSO INCLUDES** a series of stories, in partnership with the World Economic Forum, focusing on people who are seizing this moment of transformation. Like Warren Mayor Franklin, London Mayor

Sadiq Khan believes in his city’s capacity to pick itself up off the mat. Staff writer Ciara Nugent writes about his efforts to drive environmental and social justice in one of the world’s largest and busiest cities. “The history of London is Muhammad Ali, knocking people out,” Khan says.

World Economic Forum chairman Klaus Schwab—80 years after *TIME*’s founder famously declared the “American Century”—writes that the long-anticipated “Asian Century” is gathering steam. The transformation has been largely driven by China, whose failures on human rights and democratic freedoms are undeniable, as is its success as an economic powerhouse. It has lifted hundreds of millions of its citizens out of poverty and is surging ahead in the adoption of Fourth Industrial Revolution technologies. But as Schwab points out, China and the rest of Asia face the same social, economic and environmental crises as everyone else—and overcoming them will require significant global cooperation.

How do we do that in this moment of crisis and division?

I FIND HOPE in a group called Inspiration4, the subject of a profile in this issue and a documentary series from *TIME* Studios, airing globally on Netflix beginning Sept. 6. The mission—which also aims to raise \$200 million for St. Jude Children’s Research Hospital—will mark the first time an all-civilian, nongovernmental crew has taken to orbit, and is led by startup CEO and pilot Jared Isaacman, who bought all four seats aboard a SpaceX Dragon rocket.

“I could have just invited a bunch of my pilot buddies to go, and we would have had a great time and come back and had a bunch of cocktails,” Isaacman told *TIME* editor at large Jeffrey Kluger. “Instead, we wanted to bring in everyday people and energize everyone else around the idea of opening up spaceflight to more and more of us.”

We hope you join us and Inspiration4 for the mission.

### ON THE COVERS:



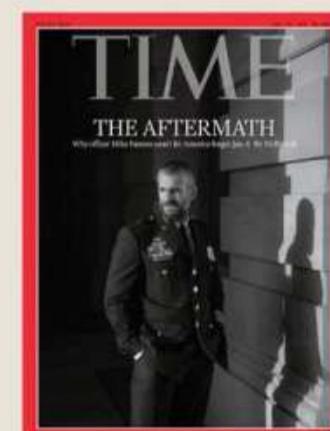
Hayley Arceneaux,  
Sian Proctor, Chris  
Sembroski and Jared  
Isaacman

PHOTOGRAPH BY  
PHILIP MONTGOMERY  
FOR TIME



Extreme heat and  
drought in the  
American West

PHOTOGRAPH BY  
ADAM FERGUSON  
FOR TIME



Mike Fanone  
PHOTOGRAPH BY  
CHRISTOPHER LEE  
FOR TIME



ILLUSTRATION BY HARRY  
CAMPBELL FOR TIME

A handwritten signature in black ink that reads "Edward Felsenthal".

Edward Felsenthal,  
EDITOR-IN-CHIEF & CEO  
@EFELSENTHAL

# Bushido can help us to recalibrate capitalism to be more sustainable

THE CORONAVIRUS PANDEMIC IS PROVING TO BE AN AGENT OF CHANGE. Our efforts to contain the spread of COVID-19 have produced some positive trends, including accelerated digitalization and a transition to net-zero emissions. However, the crisis has exposed a lack of international cooperation, worsened already widening disparities, and deepened a decline in births. The world is now at a crossroads. Will we continue down old pathways? Or will we move forward, overcoming social challenges and beginning the transformation to a sustainable society?

As a businessperson, I believe we should embrace transformation, and I would like to propose three keys to achieve it.

First, we need to emphasize long-term prosperity over short-term profits. We must prioritize social values, which are broader and more inclusive, must take precedence over economic values.

The principles of Bushido, the traditional Japanese code of moral precepts, emphasize the common good of society and the balance between altruism and self-interest. I believe these principles can serve as a compass to guide us on our journey to a sustainable world. In addition, we need to examine whether our capital markets are evaluating social value creation by companies appropriately.

Second, businesses should take practical actions to lead by example. Companies must use their compass to understand what various stakeholders want and provide solutions. To create social value, we must be willing to tackle social challenges. In doing so, business can become the driving force for transformation.

## THE SOMPO MANIFESTO (EXCERPT) FROM "BUSHIDO CAPITALISM"

- Embrace the virtues and benefits of Security, Health and Wellbeing and the SOMPO concept of a 'Theme Park' of diverse products for customers.
- Adapt and follow the principle of Bushido to provide social value that contributes to building a sustainable future.
- Adopt the business principle of Sampo-Yoshi-success through responsibility and achieving three-way satisfaction for the seller, buyer and broader society.
- Re-engineer the business to fully embrace and address climate change.
- Value collaboration over competition. Celebrate value in all that we do.
- Use technology wisely. Understand data as a precious commodity.
- Do not overlook what is close to home. Think big!
- Celebrate your own rebel. Lead by example.



KENGO  
SAKURADA  
Group CEO  
Sompo Holdings, Inc.

Third, to solve social issues in our diverse and complex societies we can't rely on the methods of the past. Transformation requires innovation. And innovations that are meaningful, impactful and enduring are often the result of collaborations among diverse players.

Building a sustainable society demands commitment. As part of my commitment, I created "the SOMPO Manifesto," in which I incorporate Bushido philosophy into the business of SOMPO.

The manifesto is a code of conduct to help SOMPO achieve its purpose of "realizing a society where all people can enjoy their lives in health and prosperity." As with Bushido, the manifesto emphasizes the common good. It guides the practical actions of every SOMPO employee.

SOMPO is striving to solve social issues in the areas of security, health, and wellbeing. We do this by utilizing "real data" \* obtained from the fields of insurance and nursing care. SOMPO's "Real Data Platform" can create innovative solutions to social challenges. It connects the know-how and cutting-edge technologies of diverse partners with the "real data" of SOMPO. The result is new value for society.

While business should lead, behavioral changes among the public and support from government policymakers are also essential. The social system can only be recalibrated through multi-stakeholder collaborations. I understand the Stakeholder Capitalism Metrics promoted by WEF are not just about ESG disclosure. They have been designed to launch a multi-stakeholder discussion on what the value of a company should be for humanity and society. This is a crucial conversation, and we welcome it.

My desire is to work with diverse partners to accelerate the transformation to a sustainable society. Our ultimate goal should be to leave a better world for future generations. Join us!

\* "real data": Data with clear origins from the real-world activities of individuals and companies (e.g. health information) unlike virtual data generated from activities on the Internet, such as SNS.

For more stories on SOMPO's mission including its Real Data Platform, see inside this issue.

# Conversation



## WHAT YOU SAID ABOUT...

**WORK IN PROGRESS** The “Rethinking Work” cover package in TIME’s Aug. 2/Aug. 9 issue left readers thinking about job prospects in a post-pandemic world. Many shared their thoughts about calls for a \$15 minimum wage in the U.S. “This is long overdue,” wrote Rita Ballone of Carmichael, Pa. “Workers that struggle to pay bills are fed up hearing about the pay of CEOs and are demanding more.” “This emphasis on \$15 per hour is sad,” added

Elizabeth Harmon of Wayne, Pa. “It is not a living wage in most parts of the country ... and this nation should be ashamed to offer it as such.” But “wage increases that are the product of an uncontrolled epidemic ... will likely be temporary and of little benefit to low-wage unskilled workers,” cautioned Enrique Puertos of Cleveland, Ga.

**READERS ALSO RESPONDED** passionately to Melissa Chan’s feature on animal-friendly workplaces. Amy Hurst of Olathe, Kans., suggested companies consider on-site facilities for pets: “Employees could bring their animals to work, see them on breaks and

lunch and give their animals much needed exercise,” she wrote, while Dennis Middlebrooks of Brooklyn countered that such policies show “a callous disregard” for workers with allergies. And despite any separation anxiety, Katy Schweigerdt of Denver argued, “it is in fact beneficial for dogs to learn to self-soothe and relax while their owner is gone.”

**[I] hope this accommodation becomes much more acceptable ... A happier workplace will bring dividends.’**

ELAINE LIVESY-FASSEL, Los Angeles

**‘Businesses need labor. They will pay whatever the market will bear.’**

JACK LEE,  
Yorktown Heights, N.Y.

## Behind the scenes

“With every ‘thank you’ that he gets, it’s followed by a death threat,” the photographer Christopher Lee says of Washington, D.C., police officer Mike Fanone, who appears on a cover of this issue of TIME and in an accompanying profile by national political correspondent Molly Ball, following his recent testimony to Congress on the Jan. 6 insurrection at the Capitol. “I tried to show those conflicting feelings in the portrait,” Lee explains.

Learn more about the cover shot—and Lee’s own experiences covering Jan. 6—at [time.com/mike-fanone](http://time.com/mike-fanone)



**FRONTLINE BARBIE** Among a collection of Barbie-branded Mattel dolls honoring health care workers is a likeness of Amy O’Sullivan, a Brooklyn nurse who appeared on a cover of the 2020 TIME100 issue, our list of the world’s most influential people. For details visit [time.com/frontline-dolls](http://time.com/frontline-dolls); reread O’Sullivan’s profile at [time.com/amy-osullivan](http://time.com/amy-osullivan)



## bonus TIME climate

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**MORE ARTISTS TO BE ANNOUNCED**

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# For the Record

**'He always protected others. He just didn't protect himself.'**

**BAZHENA ZHOLUDZH,**  
partner of Belarusian  
dissident Vitaly Shishov, in  
an Aug. 5 interview; Shishov  
was found dead on Aug. 3 in  
Ukraine, in what European  
Parliament members have  
since said "looks like a  
political killing"

*'I didn't want to leave, but I have to. And I want to keep winning. That's my mentality.'*

**LIONEL MESSI,**  
in a tearful Aug. 8 press  
conference confirming his exit  
from the Spanish soccer team  
FC Barcelona after 21 years  
with the club; on Aug. 11,  
Messi signed with French  
team Paris Saint-Germain

# 340,000

Number of students across the U.S.  
who were expected to attend public-school  
kindergartens starting in fall 2020 but  
did not, amid the COVID-19 pandemic,  
according to government data published  
by the New York Times on Aug. 7

# 'IT WAS AN ERROR TO SIGN THAT LAW. I ADMIT THAT.'

**ASA HUTCHINSON,**  
Republican governor of Arkansas, in an Aug. 8  
interview acknowledging regret over his approval of a law  
banning mask mandates in the state

## 'A code red for humanity.'

**ANTÓNIO GUTERRES,**  
U.N. Secretary-General, in an Aug. 9 statement after  
the release of an Intergovernmental Panel on Climate  
Change report that found the opportunity to limit the  
impact of climate change is rapidly narrowing



*'More and more, I find bathing to be less necessary.'*

**JAKE GYLLENHAAL,**  
discussing his hygiene  
habits in an Aug. 5  
interview with *Vanity Fair*



# \$5,800

Value of a bottle of  
Japanese whisky gifted  
to then Secretary of State  
Mike Pompeo in 2019;  
the whisky has since  
gone missing, according  
to an Aug. 5 notice from the  
State Department



## GOOD NEWS of the week

U.S. Citizenship and  
Immigration Services will  
permit nonbiological and  
nongestational parents to  
pass their U.S. citizenship  
to their children born  
abroad as of Aug. 5, in a  
win for LGBTQ families  
among others

# The Brief

**ADJUSTING**  
Pedestrians in New  
York City on Aug. 2,  
as the COVID-19 Delta  
variant continues to  
spread across the U.S.



INSIDE

A NEW MOMENT FOR MENTAL  
HEALTH AT TOKYO GAMES

NEW YORK'S GOVERNOR OUT  
AFTER HARASSMENT REPORT

'UNPRECEDENTED' FOREST FIRES  
BLAZE ACROSS GREECE

PHOTOGRAPH BY DINA LITOVSKY

*The Brief* is reported by Eloise Barry, Tara Law, Sanya Mansoor, Ciara Nugent, Billy Perrigo, Nik Popli, Simmone Shah and Julia Zorthian

# The Brief Opener

HEALTH

## The world beyond Delta

By Jamie Ducharme

**E**XPERTS PREDICTED, FROM THE START, THAT THE pandemic would end with a whimper, not a bang. That is, COVID-19 won't so much disappear as fade into the background, becoming like the many other common infectious diseases that sicken people, but also can be controlled with vaccines and drugs.

"This can become a livable pathogen where it's there, it circulates, you're going to hear on the evening news about outbreaks in a dorm or a movie theater, but people go about their normal lives," former U.S. Food and Drug Administration (FDA) Commissioner Dr. Scott Gottlieb predicted in an April 2020 interview with TIME. For a while, it felt like the U.S. was closing in on that point. Highly effective vaccines made their way into millions of arms. The U.S. Centers for Disease Control and Prevention (CDC) relaxed its guidance on wearing face masks. By mid-June, the U.S. was recording an average of about 11,500 new cases each day, with deaths and hospitalizations falling commensurately. Businesses, schools and offices were preparing to reopen; travel was rebounding; and life was feeling pretty normal.

Then the highly transmissible Delta variant hit. The U.S. is now clocking around 100,000 new infections per day. Fewer people are dying or ending up in the hospital than at similar points during previous waves—but with only half the country fully vaccinated, millions in the U.S. remain vulnerable. The situation has grown bad enough that the CDC is again recommending that vaccinated people in certain areas wear masks indoors, and many schools and offices are walking back just-finalized reopening plans. Is this really what it feels like to live with COVID-19?

There is only one human virus that the World Health Organization officially considers eradicated: the one that causes smallpox. It's more likely for a pathogen to instead become endemic—that is, part of life in a particular place. Endemic viruses circulate consistently, and not without some disease and death, but they don't bring society to a screeching halt.

That's the fate many experts see for SARS-CoV-2, the virus that causes COVID-19. "There's no plausible way I can imagine us getting to zero COVID-19," says Dr. Sandro Galea, an epidemiologist and dean of the Boston University School of Public Health. A more realistic end point, he says, is for widespread immunity to make it so most people who get COVID-19 suffer no more than they would from a severe cold. The flu, for example, infects millions of people in the U.S. each year, but lands far fewer in the hospital and kills fewer still.

Thanks to vaccines, Galea says, the U.S. isn't so far from a similar situation with COVID-19. While death and hospitalization rates are dangerously high in states with low vaccine coverage, like Louisiana, the national picture is changing. About 125,000 people in the U.S. were diagnosed with COVID-19 on Aug. 6 and fewer than 600 died from it that day. On the same



▲  
*People receive COVID-19 shots at a mass-vaccination site in Seattle on March 13, 2021*

day last summer, by contrast, there were about 60,000 new cases diagnosed and more than 1,200 new deaths.

**NO VACCINE IS PERFECT.** As was always expected, some immunized people are experiencing "breakthrough infections," which can (but rarely do) lead to serious illness. Analysis from the CDC also suggests vaccinated people who get infected with the Delta variant can infect others. But that doesn't mean the vaccines aren't doing their job. They were designed to protect against severe disease and death, not infections. On that front, they're doing exceptionally well. Just .01% of fully vaccinated people in the U.S. have reported a breakthrough infection that led to severe disease, according to recent CDC data.

Nevertheless, an obvious problem remains: about half the U.S. population still hasn't been vaccinated. That's not sustainable, says Dr. Vineet Arora, dean for medical education at the University of Chicago Pritzker School of Medicine. She finds the conversation about endemic COVID-19 premature. There are still "tools in our toolbox" we need to use



before waving the white flag, Arora says.

For example, the FDA has yet to authorize vaccines for kids younger than 12, leaving millions of children vulnerable. The three vaccines available in the U.S. right now have also received only emergency-use authorization rather than FDA approval, a higher standard that involves a longer review process. If and when the FDA grants that approval, Arora says, it could boost confidence in the shots and make schools and workplaces feel better about requiring them.

And though vaccine hesitancy has been discussed ad nauseam, many of the 30% of U.S. adults who remain unvaccinated are not “antivaxxers.” Surveys consistently show that roughly 15% of U.S. adults say they will not get the vaccine under any circumstances. But that leaves another 15% in the gray area. Some still want to wait and see what happens to people who have already been vaccinated. A small percentage have medical conditions that prevent them from getting vaccinated. Others struggle to access vaccines because they don’t have access to health care or can’t take time off from work or childcare,

Arora says. Reaching those people can take lots of time and individual attention, but she says it can be done with targeted, culturally sensitive community outreach. Already people seem to be warming to vaccination as they see the impact of the Delta variant close to home: on average, more than 400,000 Americans are now getting their first dose each day, nearly double the daily average a month ago.

But if the U.S. accepts COVID-19 as an unchangeable fact of life too soon, “we’re giving up on our children, as well as people who already are living with structural inequities,” Arora says. Further, letting our guard down early could open the door to new variants even worse than Delta. The longer a virus spreads, the more chances it has to mutate—potentially to the point that currently available vaccines no longer offer strong protection.

“The flu virus changes constantly,” explains Katherine Xue, a postdoctoral fellow at Stanford University who studies viral evolution. “It’s that change that allows it to evade the buildup of immunity that we acquire through our own previous infections”—hence the need for annual flu shots. As SARS-CoV-2 mutates, it will likely get better at outsmarting the body’s defenses. As with other viruses, you’d likely experience subsequently milder illness with each exposure, but “the more different the virus is, the more pressure it may place on those immune defenses,” Xue says.

**THAT’S ANOTHER ARGUMENT** for staying vigilant about COVID-19 prevention. “As long as the virus is evolving, we have to evolve with it,” Arora says. That means resuming precautions like wearing masks indoors when conditions call for it and vaccinating as many people as quickly as possible. As long as the virus continues to circulate and mutate globally, there will be periodic spikes in infections. But if SARS-CoV-2 behaves

like other similar viruses, these spikes should grow progressively milder, since a larger and larger chunk of the population will have immunity, either through vaccination or prior infection, each time it flares up. Eventually it could become a disease that primarily affects young children, since everyone else would have had a brush with it before, says Jennie Lavine, a computational biologist who models infectious diseases at Atlanta’s Emory University.

“If everyone 50 years from now is getting a first [COVID-19] infection between the ages of 0 and 5, that would actually be lower disease burden than flu,” Lavine notes, because kids, at least so far, have been less likely than adults to develop serious cases of COVID-19.

It’s possible, of course, that future variants could hit kids harder than initial strains, as already seems to be happening to some degree with Delta. Elderly adults and the immunocompromised will likely remain more vulnerable to COVID-19, meaning health officials will have to find ways to keep them safe. And there will probably continue to be people who develop long-lasting symptoms after even mild cases of COVID-19, a serious problem that demands more research and better treatments.

None of those exceptions should be discounted. But in terms of living with COVID-19 at a population level, turning it into a disease that kills or hospitalizes far fewer people than it infects is the ideal scenario. “There’s never going to be a MISSION ACCOMPLISHED banner” or an exact point when the virus becomes endemic, Xue says. “It’s going to be a very gradated move back toward normal life.”

Humanity has done this before. Viruses that routinely circulate today caused pandemics in the past. The point is not to minimize the suffering that occurred during those pandemics, but to recognize that the world eventually came out on the other side—and that the same is possible for SARS-CoV-2. □

**50%**

Percentage of people in the U.S. fully vaccinated as of Aug. 10

**71%**

Percentage of adults in the U.S. who had received at least one dose as of Aug. 10

**15%**

Rough percentage of adults in the U.S. who say they will not get the vaccine under any circumstances

## NEWS TICKER

### Mexico sues U.S. gun companies

The Mexican government filed a **lawsuit against major American gun manufacturers** on Aug. 4, accusing them of contributing to illegal arms trafficking to drug cartels and other criminals. The suit alleges that the firearm companies failed to properly monitor their distribution systems.

### Unrest over religious sites in Pakistan

Authorities in Pakistan have arrested 50 people over **an Aug. 4 attack on a Hindu temple**. The unrest came in response to the court's decision to release on bail an 8-year-old Hindu boy charged with blasphemy. The boy, accused of urinating at a religious site, is the youngest person to be charged with the crime in the country.

### 'Unruly' airline passengers on the rise

The Association of Flight Attendants reported an **"unprecedented" increase in disruptive passengers** in the first half of 2021—with more than 600 incidents investigated by the Federal Aviation Administration, almost double the number from the two previous years combined.

## GOOD QUESTION

### Will athletes' mental health remain a priority post-Olympics?



EVEN BEFORE SIMONE BILES THREW THE Tokyo Olympics off their axis, Jessica Bartley knew mental-health issues were weighing heavily on athletes. Bartley, a psychologist and the director of mental-health services for the U.S. Olympic and Paralympic Committee, says her team received about 10 support requests daily during the Games.

"The Games are really an incredible opportunity to start to have those conversations," says Bartley, whose group was the first to travel with Team USA specifically to support athletes' mental well-being. Taking place amid a pandemic that's had a massive impact on global mental health, the Tokyo Olympics were always going to present additional challenges for competitors. But once Biles pulled out of the women's gymnastics team event, the issue became a defining theme.

Her decision, magnified by a global spotlight, created a rare opportunity to move the discussion from raising awareness to taking action. Biles' fellow Olympians recognized the gravity of the moment. "With everything that Simone has gone through, I'm really proud of her," says Allyson Felix, Team USA's most decorated track-and-field Olympian ever, "and the way she is standing up for herself but also making things better for others."

For Olympians, the burden of expectation can be debilitating. Not only is their

performance the culmination of years of training, sacrifice and physical struggle, but the personal stakes are amplified by having their individual success held up as the symbol of a nation's hopes. That pressure may be particularly acute for elite athletes because many are at a point in their lives when they are more likely to face mental-health issues. Research shows that such issues are most likely to affect people during their teens and young adulthood; more young people are visiting the emergency room for mental-health conditions and also turning to crisis-intervention services like hotlines or online therapy.

For the athletes whom Bartley and her team worked with at the Games, Biles is helping create a new path—one that can value results and medals but doesn't put them above all else. (That is far from the current norm; few athletes feel able to take a step back without risking their place on a team or deal with a sponsor.) The right mindset can go a long way toward ensuring longer and healthier careers, Bartley says.

"Hopefully this reframes how people look at athletes," says Alex Bowen, a member of Team USA's men's water-polo team. "It's not all about what you are but what you are trying to be ... The Olympics are about trying to become your best self. And it's O.K. to get help to become your best self." —ALICE PARK/TOKYO, with reporting by SEAN GREGORY/TOKYO □

## SPORTS

### Olympic pride

A record 183 out LGBTQ athletes competed in the Tokyo Olympics, according to news site OutSports. They represented at least 30 countries—though notably not Japan—and took home more than 30 medals collectively. Here are some of their big wins.



**SUE BIRD & DIANA TAURASI**

The two Team USA veterans each scored their fifth gold in Tokyo—a record for any basketball player. Their victory extended the team's Olympic winning streak to 55 games; its last loss was in 1992.



**NESTHY PETECIO**

The boxer's silver medal makes her the first woman to win a medal in the sport for the Philippines. "This fight is also for the LGBTQ community," Petecio told reporters after losing the gold-medal bout.



**TOM DALEY**

The openly gay British diver finally won gold in the men's 10-m synchronized platform diving competition at his fourth Olympic Games—and knitted between events, crafting a pouch for his medal.



**QUINN**

Canada's first gold medal in women's soccer was also history-making for the team's midfielder, who became the first transgender and nonbinary Olympic athlete to receive a medal of any kind.



**DEFENSE DEPT.** U.S. Marines are pictured preparing to receive the Moderna COVID-19 vaccine at Camp Hansen in Kin, Japan, in April. About 73% of active-duty military have received at least one dose of a vaccine as of Aug. 9, according to the Department of Defense. Under a new plan backed by President Joe Biden, COVID-19 vaccines will be added to the list of immunizations required for U.S. troops. “To defend this nation, we need a healthy and ready force,” Secretary of Defense Lloyd Austin said in an Aug. 9 memo.

#### BULLETIN

## Fate of infrastructure bill in hands of House Democrats

YOU COULD FEEL THE RELIEF IN Washington on Aug. 10 as the Senate advanced a bipartisan infrastructure bill that would fix roads, rails and pipes across the U.S. For President Joe Biden, it is potentially a legacy project. But any celebration would be premature, as the fate of \$550 billion in new spending is at best uncertain. Progressives in the House are warning that they may tank it unless they also get Senate approval for a \$3.5 trillion companion package that could pass with only Democratic votes. So as lawmakers headed home for the August recess, they left behind a lengthy to-do list for their return.

**NUTS AND BOLTS** Clean-energy projects, highway overpasses and public-transit upgrades were bipartisan priorities in the infrastructure plan. Leaders have punted on these issues for years; the White House now estimates that 1 out of every 5 miles of highway in the U.S. is in poor condition, and 45,000 bridges stand at serious risk. The agenda isn't sexy, but it is a down payment on deferred upkeep that officials in both parties have recognized puts the nation's economic future in peril.

**SYSTEMIC INEQUITY** In many instances, the bill includes huge piles of cash to close the gap between rural and urban communities, including \$65 billion to get broadband Internet to the estimated 30 million U.S. households that can't reliably get online. An additional \$15 billion comes to replace the lead pipes in the 10 million homes with contaminated water-supply lines (although experts say the cost of a real fix would be closer to \$45 billion). And the measure also has carve-outs to reconnect neighborhoods divided by existing infrastructure, such as highways that plow through the middle of Black neighborhoods.

**CONTINUING NEGOTIATIONS** The bill still faces challenges in the House, where Democrats have little room for error. Progressives say they may reject the package unless they get another bite at the buffet—they're seeking a second plan that would pay for universal pre-K, two years of college and what climate activists call a Green New Deal. And Speaker Nancy Pelosi says she'll take up the Senate's plan when she can match it with a package that fights poverty and climate change. —PHILIP ELLIOTT

#### NEWS TICKER

## Cuba opens up private sector for businesses

Cuba **legalized small and medium-size businesses** on Aug. 6 in a boost to the private sector. The country's communist government has promised to update its restrictive economic models after mass demonstrations in July highlighted Cubans' despair over a worsening economic crisis.

## Epstein accuser sues Prince Andrew

Virginia Giuffre—a longtime accuser of Jeffrey Epstein—filed a lawsuit against Prince Andrew on Aug. 9, alleging that **the British royal sexually assaulted her** when she was 17. (Prince Andrew denies the charge.) Meanwhile, about 150 sexual abuse victims received nearly \$125 million from Epstein's funds.

## Marburg virus reported in West Africa

West African authorities have located the region's **first known case of the deadly Marburg virus** after a death in Guinea, the WHO said Aug. 9. Health officials have raced to contain the spread of the highly infectious disease, from the same family as the virus that causes Ebola.





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## LightBox

### Fleeing fires

As wildfires consume the village of Limni on the Greek island of Evia on Aug. 6, residents board a ferry to evacuate.

Dry conditions and one of the worst heat waves to strike the southern Mediterranean in decades have contributed to hundreds of blazes that have burned through pine forests and villages across the region in recent weeks, killing at least

10 people in Greece and Turkey, destroying thousands of homes and forcing the evacuation of popular beach resorts.

Greek Prime Minister Kyriakos Mitsotakis has labeled the situation a “natural disaster of unprecedented dimensions.”

Photograph by Nicolas Economou—Reuters  
►For more of our best photography, visit [time.com/lightbox](http://time.com/lightbox)

# The Brief Milestones



**Governor  
Andrew Cuomo  
at a COVID-19  
vaccination site  
in New York City  
on March 17**

## RESIGNED

### Andrew Cuomo

New York governor felled by harassment report

By Vera Bergengruen

NEW YORK GOVERNOR ANDREW CUOMO ANNOUNCED HIS intent to resign from office on Aug. 10, one week after the release of a damning investigation by the state's attorney general left him teetering on the edge of impeachment. The long-awaited report into a slew of sexual-misconduct allegations found that Cuomo, 63, had harassed 11 women by kissing, groping or making suggestive comments, creating a "toxic culture" of fear and intimidation in his office.

"What he did to me was a crime. He broke the law," said Brittany Comisso, one of the women accusing Cuomo of groping her, in an interview with CBS News that aired on Aug. 9. "The governor needs to be held accountable."

It was a stunningly rapid fall for the powerful three-term Democrat, the scion of a political dynasty who just a year ago was hailed as a national hero for his response to the pandemic's first wave in New York. Daily press conferences sold him as a steady foil to the Trump White House in the chaotic early days of COVID-19, leading to a \$5 million book deal and rumors of a presidential run. (More recently, however, he has faced investigations into whether his office provided false information about COVID-related deaths at nursing homes, as well as into his alleged use of state resources to write and promote his memoir.) But years of alleged predatory behavior finally caught up to the

**APPOINTED**  
Lieutenant Governor  
Kathy Hochul,  
as Cuomo's  
replacement,  
becoming New York's  
first female governor



famously combative governor, who acknowledged that the legal drama of an impeachment would cripple his administration.

Cuomo has steadfastly maintained he had done nothing wrong and resisted previous calls for his resignation by the New York Democratic Party, top congressional Democrats and President Joe Biden himself. But state lawmakers had begun laying the groundwork for impeachment proceedings, and as his aides and allies were increasingly caught up in the report's fallout, his position was untenable. "Given the circumstances, the best way I can help now is if I step aside and let government get back to government," Cuomo said in a televised statement. "And therefore that is what I'll do."

**THE CIRCUMSTANCES ARE** striking for a politician who positioned himself as a champion of women during the #MeToo movement. Cuomo had previously called for the resignations of politicians facing similar allegations and proclaimed there should be a "zero tolerance policy when it comes to sexual harassment." But while he blamed a generational shift in his resignation statement, saying he "didn't realize the extent to which the line has been redrawn," Cuomo had previously touted his record of signing bills to combat workplace sexual harassment, declaring in 2019 that they should "honor all the women who have endured this humiliation." The report into Cuomo's conduct alleged that he and his advisers had sought to discredit and retaliate against some of his accusers, questioning their motivations and character.

His resignation, effective Aug. 24, will make Lieutenant Governor Kathy Hochul the first woman to serve as governor of New York. His deputy of almost seven years, she will have to govern in the scandal's aftermath and the ongoing battle against another surge in COVID-19 cases. "I agree with Governor Cuomo's decision to step down," she said in a statement following his announcement. "It is the right thing to do and in the best interest of New Yorkers." □

# TheView

WORLD

## THE ONES WE LEAVE BEHIND

By Kimberly Dozier

An Afghan man I'll call "Mohammed" saved my life. It was 2001, just over two months since the Sept. 11 attacks, when Mohammed drove me into Afghanistan as Kabul was falling. He spirited me through a Taliban checkpoint between Jalalabad and the capital, where, an hour or so later, a car full of journalists were brutally killed.►

INSIDE

THE MAYOR OF BILLINGS, MONT., ON WHAT DRAWS PEOPLE TO HIS CITY

A DEFINING MOMENT FOR TUNISIA'S YOUNG DEMOCRACY

# The View Opener

Mohammed found me, then a CBS News reporter, a safe place to stay in chaotic post-Taliban Kabul. That's what a "fixer" is for a foreign correspondent: part translator, part driver, part MacGyver. Every time I returned to the country, I would check on him and his family. And if I asked, he would drive me to hell, and back.

In 2015, three men beat and stabbed Mohammed's 18-year-old son, saying he was being punished because his father "had worked for the Americans," Mohammed told me. He rushed his son to the hospital, then secreted his whole family to another part of the sprawling capital, always fearing the tap on the shoulder that meant he'd been found.

When he applied for the U.S. visa for Afghans who'd worked for the U.S. government, he was baffled to find he wasn't eligible. He had worked for an American—me—but not a soldier or diplomat. If that difference didn't matter to the Taliban, he wondered, why should it matter to the U.S. government?

**AS OF AUG. 2**, Mohammed and hundreds like him are at last eligible for special visas similar to those Washington has offered to the some 20,000 Afghans who worked for the U.S. government during the war. Multiple news outlets, including my former employer CBS News, had petitioned the Biden Administration to also help "those Afghans who have worked with the U.S. media as journalists, interpreters, and support staff and now fear retaliation from the Taliban."

But here's the catch: the U.S. won't even start looking at Mohammed's application until he gets himself and his family out of Afghanistan. Unlike what's being offered to former U.S. government employees, there will be no special flights and no third country set aside where his family can wait safely. Processing applications could take more than a year, with no guarantee of approval.

Even this slim chance of a safe exit is not available to tens of thousands of Afghans now fleeing their homes. Militants have seized roughly two-thirds of the country, including nine provincial capitals, as of Aug. 11, with fierce fighting continuing. General Mark Milley, chairman of the U.S. Joint Chiefs of Staff, admitted



*U.S. Army Lieut. Colonel Burton Shields talks through his interpreter, left, during a meeting with village leaders in Helmand province on Feb. 16, 2010*

in late July that "strategic momentum appears to be sort of with the Taliban."

President Joe Biden says this war is now up to the Afghans, although the U.S. will continue to lend financial, humanitarian and even some air support. His military commanders insist a Taliban takeover is not a given; Milley also said in July that the some 300,000 Afghan security forces are just falling back to protect cities. Afghan President Ashraf Ghani says that's the best his troops can do because of the rapid U.S. withdrawal, set to finish Aug. 31, and what he called "an imported, hasty" peace process.

From Biden's perspective, the calculation is simple: many in both political parties and most Americans want out. So do many men and women who served there. Nearly 2,500 U.S. troops and more than 3,800 U.S. private security contractors died in the war, per the Associated Press. More than 100,000 Afghan civilians have died in the conflict, according to the U.N. The U.S. has spent in the region of \$2 trillion, and still counting, on the conflict. "It's the most comprehensive failure in my lifetime," one former senior Army officer told me.

For Afghans, navigating the past two decades has meant near daily choices of loyalty. Those who chose the Americans and the Western-backed government now fear a bloody payback. Reports are flying on social media of Afghan com-

mandos allegedly executed by Taliban forces, women forced to marry Taliban fighters, and the return of medieval punishments like stoning and beheading in areas now under Taliban control. The incidents are nearly impossible for U.S. diplomats on lockdown in Kabul to verify, or deny. Many Afghans believe them.

Mohammed understands what, and who, is coming. Driving me from Jalalabad to Kabul in 2001—or rather, riding a taxi because a warlord had stolen our car—he'd spotted the impromptu checkpoint of armed black-turbaned men standing on either side of the road. Mohammed spoke quietly but urgently to the driver, who floored it past the group before they could spot me in the back. By the time they did, we'd torn past them around a mountain corner, out of sight. That kind of violent, random threat is what Mohammed fears most today. "Now, living in Afghanistan is very dangerous," he says.

Secretary of State Antony Blinken extolled the virtues of expanding the visa program to more Afghans like Mohammed. "They stood with us. We will stand with them," he told reporters. Mohammed may make it out. But what about every other Afghan left behind, who risked their life by believing in my country?

*Dozier is a TIME contributor and Observer Research Foundation America Visiting Fellow*

## LEADERSHIP BRIEF

# Where America moves

The July 21 front page of the Billings Gazette included the following stories: a local man used a bow and arrow to catch a world-record paddlefish (92 lb.) and searchers reported a possible sighting (which proved false) of a missing hiker. But the lead story was on the housing boom sweeping the nation and its impact on Montana's biggest city. "Billings real estate market ranks hottest in the country," the newspaper declared, citing a *Wall Street Journal* index, which ranked Billings as the No. 1 emerging housing market.

Billings Mayor Bill Cole, a graduate of Dartmouth College, has a theory on why people are moving to town. "The 2020 election cycle was unusually brutal and divisive," he said. "I think it's possible, although I don't have data, that some significant portion of the trend toward smaller cities has been from the coasts, from blue states to red states. It's people seeking out other people who think more like them, and where they feel more comfortable, culturally and politically." He added, "Places like Montana are going to be perceived to be further to the right, more red, and that has certain attractions for some."

—Eben Shapiro



Billings is a top destination for Americans on the move

## THE RISK REPORT

# Tunisia's chaotic dance with democracy

By Ian Bremmer



TUNISIA HAS CARRIED an especially heavy burden over the past decade. It was the first country to cast out a longtime dictator as part of the Arab Spring revolts. And it's the only one where democracy established a lasting foothold.

But all that is now in jeopardy because political pluralism has unleashed new waves of corruption, and political instability has destabilized a once strong economy. Now comes a constitutional crisis, as a president who claims to act on behalf of Tunisia's people has grabbed power.

Over the past decade, living standards in Tunisia have fallen; a fragmented political class has prevented the country from developing any sense of direction. A series of coalition governments have come and gone in quick succession, new crooks have staked claims to pieces of the country's wealth, and public frustration with corruption has only increased. Tunisia's economy has grown by an average of just 1.8% per year since the Arab Spring to 2019. Terrorist attacks that targeted tourists, a vital source of economic growth, and then the pandemic, which dropped the GDP by 8.8% in 2020, have made matters much worse. Only about 12% of Tunisia's 12 million people have been fully vaccinated, and there has been a recent surge of Tunisians immigrating to Italy.

In 2019, fed-up Tunisians elected as President a little-known political outsider named Kais Saied. Two weeks ago, Saied, a former professor of constitutional law who had clearly decided he'd seen enough of Tunisia's political mess, fired Prime Minister Hichem Mechichi and suspended parliament for 30 days. He also announced his own war on corruption after granting himself the powers of the state prosecutor.

Opposition leaders have denounced these moves as a coup, and

demonstrators on both sides of the issue have taken to the street. Saied is not exactly charismatic—he's known jokingly as Robocop because he speaks in a soporific monotone. Yet a recent local poll found that 84% of Tunisians surveyed approved of Saied's power grab.

It is just the latest example of a transition to democracy that creates enough chaos to build public support for a strongman. In neighboring Egypt, Hosni Mubarak was shoved aside in 2011 in favor of elections that briefly brought to power the Muslim Brotherhood's Mohamed Morsi in 2012. But Morsi was toppled by a military coup after just one year in power. Further afield, many of the Russians who cheered Boris Yeltsin's bid to create an independent Russia found that democracy was not what they had hoped for. A suddenly unshackled press was free to report on the frightening hyperinflation, unemployment and official corruption that left many Russians eager for a restoration of order. Since Vladimir Putin assumed power two decades ago, Russia has become a democracy in name only. It's far too early to know if Tunisia is headed in a similar direction.

**The more immediate danger for Tunisia is that its democracy is too untested**

The more immediate danger for Tunisia is that its democracy and constitution are too untested to provide a clear path forward out of this crisis that the opposition can accept. Saied claims he has a mandate to rule by decree until he appoints a new Prime Minister. The largest opposition group, the moderate religious Ennahda party, claims the number of seats it won in the most recent parliamentary elections gives it the right to choose who will lead the next government. The constitution says this issue must be resolved by a special court, but it doesn't specify who is allowed to sit on that court.

For now, Kais Saied is in charge. But unless he delivers the sense of security and hope he has promised, the goodwill won't last. □

# Space

**BY JEFFREY KLUGER**

PHOTOGRAPHS BY PHILIP MONTGOMERY FOR TIME



*The women and men of Inspiration4 will be the first all-civilian crew to fly in space, spending three days in orbit*

# J

JARED ISAACMAN IS NOT LIKELY TO FORGET THE day he almost died at 10,000 ft., back in 2011. He was flying closely alongside three others, all in L-39 fighter jets, tearing along at 460 m.p.h. over the desert southwest of Las Vegas.

The group, part of Isaacman's Black Diamonds aerobatic team, was rehearsing for an air show and trying to come up with a flashy new finish. What they decided on called for flying in a square formation and then suddenly veering toward one another, before pulling back at the last second. It would be a nifty thing to watch go right—and a terrible thing to watch go wrong.

The pilots began the maneuver at their four separate corners and then banked in toward one another. But their coordination was a mess, and the fully fueled fighter jets came screaming toward one another.

"Holy sh-t," exclaimed Isaacman over the radio. He yanked hard on his stick and veered sharply away; the others did the same. Shortly afterward, the Black Diamonds landed, gathered to debrief and reached three conclusions. First, they had gotten too close during the critical approach point. Second, the cause was most likely insufficient lateral spacing at the beginning. Third, they would never try such a high-stakes stunt again. Then they relaxed—and laughed.

"When you survive it, you can joke about it later," Isaacman says. "After we debriefed, we were imagining if you were just a hiker in the desert looking up and you're like, 'Oh, look at that.' And then you see this collision. It would be most unusual."

*Most unusual* is a decidedly understated way to describe one's own near-death experience, but Isaacman—now 38 and the billionaire CEO of Shift4 Payments, an online-payment company, as well as the founder of Draken International, a company that runs what's effectively the world's largest private air force—has always prided himself on a certain sangfroid. He needed it that day in 2011, and he'll need it again this Sept. 15, when he's set to once again be part of a team of four trying something very daring.

This time, Isaacman's crew won't be flying at

10,000 ft., but a projected 360 miles up—higher than the Hubble Space Telescope. This time there won't be four vehicles, but just one: a SpaceX Crew Dragon spacecraft. And this time the fliers won't be moving at 460 m.p.h., but at 17,500 m.p.h., launched into space atop a 215-ft.-tall SpaceX Falcon 9 rocket.

The mission, dubbed Inspiration4, will mark the first time an all-civilian, nongovernmental crew has taken to orbit. To make the mission possible, Isaacman bought all four seats aboard the Dragon for an undisclosed sum (likely in the vicinity of \$50 million each). And if he has his way, it will begin to democratize space in a way never before possible.

"I could have just invited a bunch of my pilot buddies to go, and we would have had a great time and come back and had a bunch of cocktails," Isaacman says. "Instead, we wanted to bring in everyday people and energize everyone else around the idea of opening up spaceflight to more and more of us."

Isaacman's mission will be the capstone of what has been America's summer of civilian spaceflight. On July 11, Virgin Galactic founder Richard Branson flew aboard his V.S.S. *Unity* space plane more than 50 miles high over New Mexico, crossing the boundary that the U.S. military considers the threshold of space. On July 20, Blue Origin founder Jeff Bezos bested Branson, flying aboard his *New Shepard* spacecraft above the 62-mile-high mark over Texas—crossing the so-called von Karman line, the altitude that most experts consider space's true boundary.

**THERE HAS BEEN** much media sizzle around the Branson and Bezos missions, not least because of the "Billionaire Space Race" headlines. But in fact, the pair did not do a whole lot. Their flights were little more than 10-min. up-and-down suborbital lob shots. By contrast, Isaacman and his crew will spend three days in orbit, doing real science on a real mission. The SpaceX Dragon is largely automated, but as Isaacman puts it, "it's a multiday orbital mission, and there's just a lot of time for things to go wrong." So the Inspiration4 crew has been in intensive training in case anything indeed goes wrong.

The business of selecting that crew was as unconventional as the mission itself. The world learned about Inspiration4 from a 30-sec. commercial Isaacman paid to run during the 2021 Super Bowl. The spot announced not only the flight but also Isaacman's search for three other people to join him. One of Inspiration4's goals is to help raise funds for the St. Jude Children's Research Hospital in Memphis, and for that reason one of the four seats would go to a St. Jude employee. (Isaacman aimed to raise \$200 million for the hospital; he donated \$100 million and has so far raised an additional \$13.1 million.) Another seat would be awarded through a simple lottery, which contestants could enter by making a contribution of any size to St. Jude. The final seat



## JARED ISAACMAN, 38

The commander of *Inspiration4*, Isaacman is the founder and CEO of Shift4 Payments, an online-payment company. He is also the founder of Draken International, the world's largest private air force.

would be a little harder to win, with contenders designing an online store using Shift4 software and then developing a social media campaign to share their entrepreneurial and space aspirations.

The St. Jude worker is Hayley Arceneaux, 29, a physician assistant and a survivor of childhood cancer; she will be the first person to fly to space with a prosthesis—an artificial left femur that replaces the bone she lost to her disease when she was 10. The lottery winner is Chris Sembroski, 41, an engineer at Lockheed Martin in Everett, Wash., and a U.S. Air Force veteran who served in Iraq and who in a later domestic posting helped oversee a fleet of Minuteman nuclear missiles. The winner of the online-store competition is Sian Proctor, 51, a geosciences professor at South Mountain Community College in Phoenix and a two-time NASA astronaut candidate who in 2009 made it to the final 47 out of more than 3,500 candidates before being cut. Now, not only is she going to space, she's going sooner than she might have on the traditional route. "At least one of the people chosen in that class in 2009

has not even had a chance to fly yet," says Proctor.

Yet questions surround not only this mission but also the entire enterprise of civilian spaceflight. For one thing, space travel is expensive—and to many people, the money could be better spent on solving the manifold problems on earth. In an auction for a seat aboard Bezos' flight, the winner—who later decided not to fly—bid \$28 million. That could buy a lot of schoolbooks or feed a lot of hungry people.

There's also the question of safety. Space can be a murderous place, a lesson each generation seems to have to learn anew. In 1967, NASA's Apollo 1 crew died in a launchpad fire that almost scuttled the country's lunar program. In 1986 came the space shuttle *Challenger* disaster. Then, in 2003, the shuttle *Columbia* broke apart during re-entry. More than a few people worry that giddy ambition, human hubris and the limits of technology might conspire once again, just as we're telling ourselves that the cosmic skies are safe for everyone.

"When there is a fatal accident," says Terry Virts, a retired NASA astronaut and former International



## GRAND FINALE

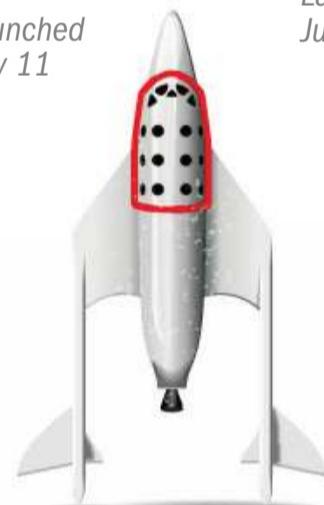
As the third civilian mission of the summer, Inspiration4 is an ambitious three-day orbital flight, as opposed to a 10-min. suborbital lob shot.

### THE NEW FLEET

How the three big space companies' crew vehicles stack up

Crew compartments

VIRGIN GALACTIC  
**V.S.S. Unity**  
60 FT.  
6 PASSENGERS  
2 PILOTS  
Launched July 11



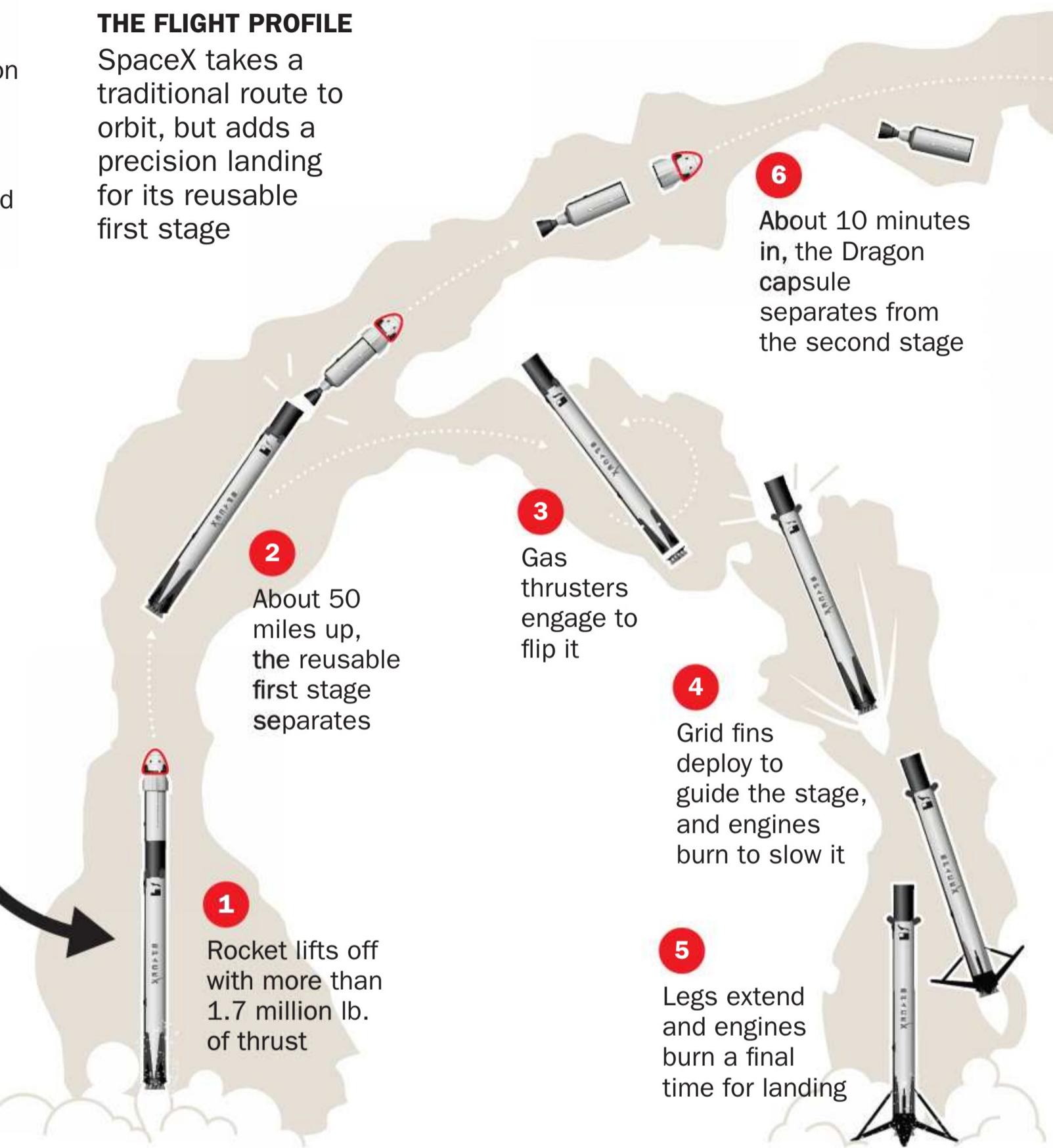
SPACEX  
**Crew Dragon/Falcon 9**  
215 FT.  
MAX. 7 CREW MEMBERS  
Launching Sept. 15

BLUE ORIGIN  
**New Shepard**  
60 FT.  
6 PASSENGERS  
Launched July 20



### THE FLIGHT PROFILE

SpaceX takes a traditional route to orbit, but adds a precision landing for its reusable first stage



Space Station (ISS) commander, “and I wouldn’t say if, I would say when, that’s going to be a real concern.”

Isaacman sees things differently. “There’s always a risk that something goes wrong, like a structural failure,” he says. “But you have confidence in the whole system and the measures that have gone into place to minimize the risk. Sometimes you land when your knees are clanking together and you say you’re lucky to be alive. But you are—and you move on.”

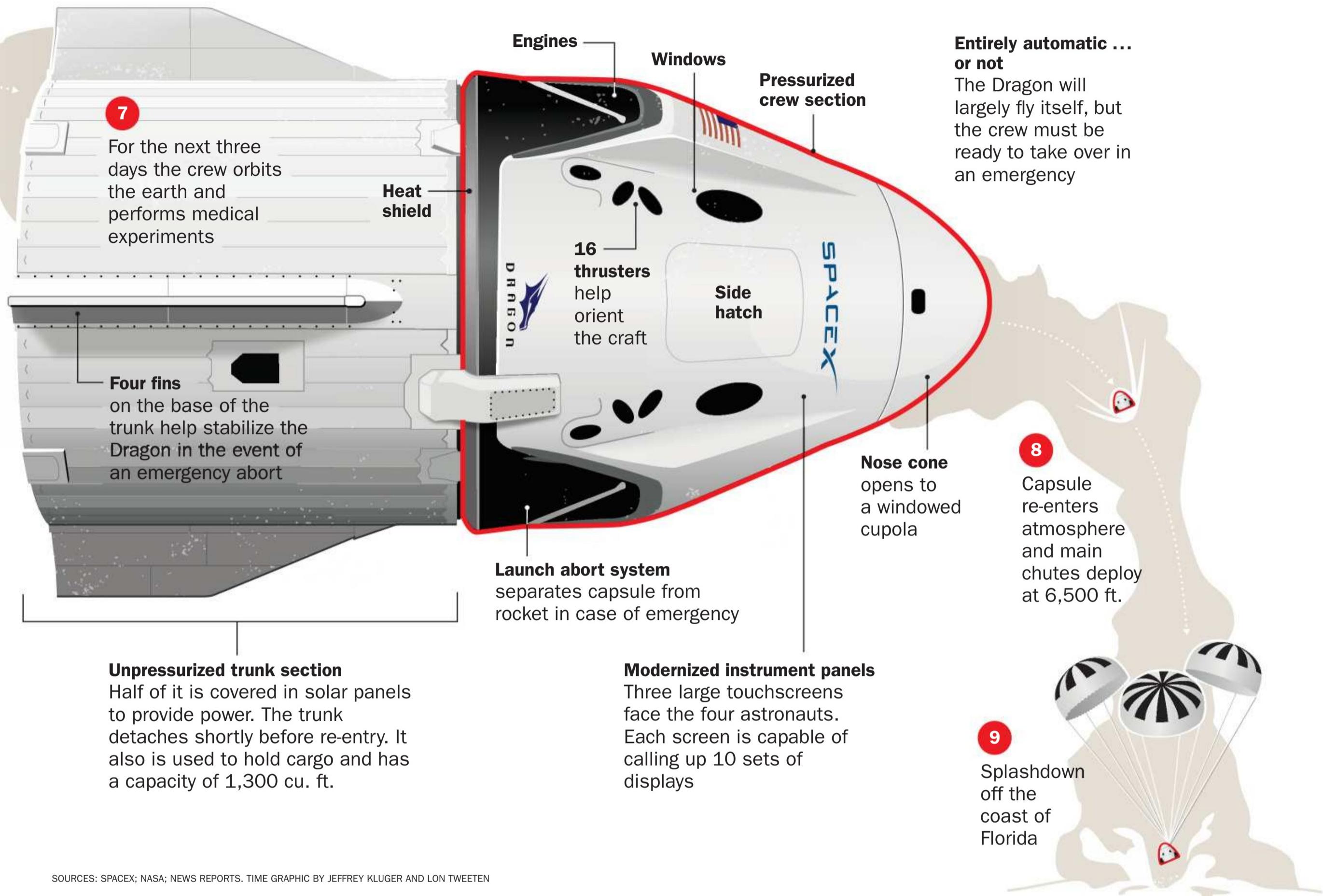
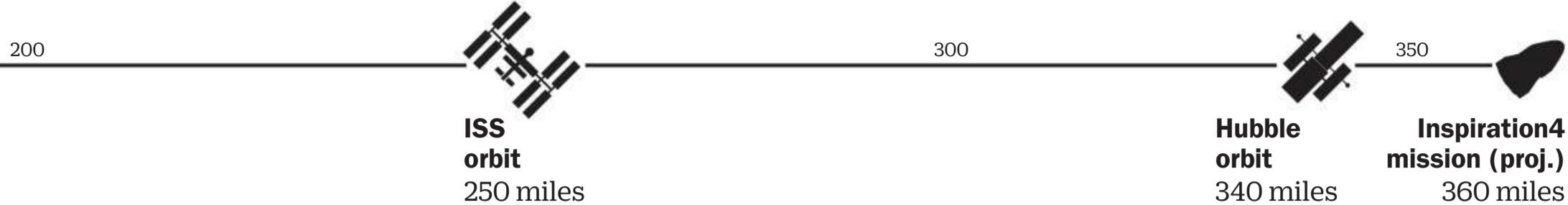
**IT'S ENTIRELY POSSIBLE** there would have been no Shift4 Payments—never mind Inspiration4—if Jared Isaacman had been a more patient kid. The child of parents who were both on their second marriages, he came into the world with two half brothers and a half sister who are 15, 13 and nine years older. That chafed—not so much the business of being so junior a member of the sibling brood, but,

as he reached his teens, at the privileges age afforded his siblings and the ones it denied him.

“They were out living their lives and I still had to raise my hand to use the restroom in school, and I was like, ‘This is ridiculous,’” he says.

Isaacman dropped out of high school in 1999, getting his GED to satisfy his parents. At the time, he and a high school classmate were trying to start their own computer and web business, but getting nowhere. So Isaacman went to work at tech retailer CompUSA, with the idea, he says, “that I could generate business and I could poach some customers.” As it turned out, a customer—a credit-card company called MSI—poached him to solve its IT problems.

“I worked there for about six months, and like a lot of people, I totally disliked one of my bosses,” he says. “I saw an opportunity to do things better and more efficiently, so I left there



SOURCES: SPACEX; NASA; NEWS REPORTS. TIME GRAPHIC BY JEFFREY KLUGER AND LON TWEETEN

and started the company that I still run today.”

Isaacman named his new enterprise United Bank Card and slowly began generating a customer base from people he had met at MSI. The new company—which he set up in his parents’ basement—marketed hardware and software allowing restaurants, bars and other businesses to process credit- and debit-card transactions, a hot business amid the digitize-everything mania of the late 1990s.

Over the past 22 years, Isaacman’s company has expanded and gobbled smaller firms—including one called Shift4, a name it took for itself (on a computer keyboard, holding shift and hitting 4 gets you a dollar sign). The company, now headquartered in Allentown, Pa., went public last year. It currently has 1,300 employees and a market capitalization of just over \$7 billion. Today, if you go into any restaurant or bar in the U.S., there’s a 50% chance your transaction

is being processed by Shift4 equipment and software. In hotels, it’s about a 40% chance.

But Isaacman, as Shift4 chief of staff Terry Sullivan puts it, “doesn’t do things that sort of normal people do. He’s so full of ambition and just takes on these mountains of projects.”

One of those projects was the unusual business of assembling his own private air force, with over 100 combat jets acquired from half a dozen countries. The force—known as Draken after the Greek word for dragon, was formally founded as a private company in 2011; the U.S. military pays it to fly simulated dogfights with American pilots, training them against the kind of real weaponry that they could one day face in a genuine shooting war.

Draken was an outgrowth of Isaacman’s love of flying, nurtured when he was 12 years old and attended space camp in Huntsville, Ala., where his

# Space



## HAYLEY ARCENEAUX, 29

A survivor of childhood cancer, Arceneaux now works at St. Jude Children's Research Hospital in Memphis. She will be the first person to fly in space with a prosthesis—an artificial femur to replace the bone she lost to her disease.



## CHRIS SEMBROSKI, 41

A veteran of the Iraq War, Sembroski is now an engineer with Lockheed Martin in Everett, Wash. He will serve as mission specialist on Inspiration4, responsible for cargo and some experiments.

parents agreed to spend an extra \$75 to let him take introductory flying lessons on a Cessna 172. Plenty of people who start with a Cessna stick with a Cessna, but Isaacman was hungrier than that. He eventually got certified in 20 civilian and military jets, including the Soviet MiG-29. He also re-enrolled in school, at Embry-Riddle Aeronautical University, in Daytona Beach, Fla., earning an undergraduate degree in aerospace studies in 2012 while also setting up his Black Diamonds team.

Even before founding Draken and the Black Diamonds, Isaacman was itching to fly much higher. In 2008, he was invited to the Baikonur Cosmodrome—which is in Kazakhstan, but functions essentially as Russia's Cape Canaveral—to watch the launch of a Soyuz rocket that was carrying Richard Garriott, one of the world's first paying space tourists.

"It was amazing," says Isaacman. "I mean, watching any rocket go up is pretty incredible, but watching a Soyuz go up is something else. You're in this

trench that's like 300 yd. away—it's a par 3 away from the rocket. If you're at Kennedy Space Center, the closest you're going to get to a rocket going off is like 3½ miles."

The next year, Isaacman approached SpaceX—which at the time was still more than a decade away from carrying its first crews to space—about buying a seat. A draft contract was hammered out, but it took SpaceX far longer than expected to get the go-ahead to fly human passengers, leaving the deal to languish and lapse. But in May of last year, SpaceX finally got its first two-person crew to the ISS, and Isaacman saw another opportunity.

"I think at some point or other, I might fly on one of your rockets," he recalls telling a senior SpaceX official late last year. (Isaacman declines to disclose the names of any SpaceX officials with whom he has conducted discussions related to his mission.) To Isaacman's surprise, the official responded directly—and encouragingly. "That may be coming along faster than

you might think,” the official said. Indeed it did: four hours later, Isaacman was put in touch over email with the head of SpaceX’s human spaceflight program.

“We understand you might be interested at some point in going on a flight with us,” the program head told Isaacman on a follow-up call. “Well, you could be the first private passenger—and it could be inside of a year.”

The two reached a verbal handshake, and all that was left was for Isaacman to break the news to his family. His wife Monica was not surprised. They’ve been together for 20 years, and she knew this was something he’d been hankering to do for a long time. She agreed straightaway. For the couple’s two daughters, ages 7 and 5, the notion is more fanciful than real. “To them, space is all Baby Yoda at this point,” Isaacman says.

**FOR THE INSPIRATION4 CREW,** the past five months have been a flat-out sprint to their planned September launch. Isaacman, who assigned himself the position of commander, wants a tight, professional and prepared crew. He personally designed part of the training program, which in part called for flying each crew member in his Soviet MiG-29, exposing them to the kinds of g-forces they’ll experience during liftoff and re-entry. Also on the agenda was a two-day hike up to 10,000 ft. on Mount Rainier in Washington State this past April.

“We got snowed on a lot of the way,” says Arceneaux, the St. Jude physician assistant, who made the hike despite her prosthetic femur. “And our ham-and-cheese sandwiches wound up frozen.”

“The constant plodding upward really did me in,” says Sembroski, the engineer. “My legs were on fire.”

That, in some ways, was the whole idea. “We want to get comfortable with being uncomfortable,” Isaacman says. “A lot of things in the spacecraft will be uncomfortable, after all.”

The rest of their training has mostly involved the usual NASA-style simulator and classroom work, only on a compressed timeline. On a recent day at SpaceX headquarters in Hawthorne, Calif., the crew practiced opening and closing the hatch, what to do in the event of a pressure leak in the hatch seal, techniques for earth observation, and splashdown and recovery procedures—and that was all before lunch.

“I’m used to doing things on NASA time, which gives you two years to train for a mission,” says Proctor. “We have from March to September.”

Once in space, the crew will be kept busy. Proctor will be the pilot—effectively Isaacman’s second in command and responsible for calling up checklists, monitoring systems and executing commands. Sembroski is mission specialist, responsible for repairs as well as proper stowing of cargo to avoid weight and balance issues. Arceneaux is the chief medical officer and will oversee most of the scientific experiments;

## HISTORY

# FOUR DECADES OF CIVILIAN SPACEFLIGHT

By Olivia B. Waxman

It’s been 52 years since Jeff Gates booked lunar passage via Pan Am’s “First Moon Flights Club,” a marketing stunt from the now defunct airline. Like thousands of other would-be astronauts, he made his reservation after watching NASA’s Apollo 11 astronauts land on the moon. But he didn’t think much about his “ticket” until the space shuttle *Challenger* broke apart shortly after liftoff in 1986, killing all seven aboard—including Christa McAuliffe, who would have been the first teacher in space. That’s when Gates, now 72, realized “commercial space travel isn’t going to be normalized anytime soon,” as he put it.

But Gates has been watching in recent weeks as a series of civilian space missions—Richard Branson’s Virgin Galactic flight, Jeff Bezos’ Blue Origin launch, and the upcoming Inspiration4 mission—are bringing his space dreams ever closer to reality. Still, this summer’s civilian launches are just the latest in a long history of private citizens’ blasting into space. Civilians have been joining highly trained astronauts for nearly four decades—a mixture of politicians who had power over NASA’s budget, people selected as publicity stunts or in the name of diplomacy, and billionaires with plenty of cash to burn.

Among the first nontraditional astronauts to fly was Senator Jake Garn (R., Utah), a former chair of the subcommittee charged with overseeing NASA’s budget; he once joked that the agency wouldn’t get “another cent” unless they let him go to space. NASA granted his wish in 1985, when he flew aboard the

space shuttle *Discovery*. NASA’s Space Flight Participant Program, an effort to launch teachers, journalists and other storytellers and influencers, soon followed, though it was scrapped after the *Challenger* disaster.

The title of “first space tourist,” however, is generally agreed to belong to Dennis Tito, a financial entrepreneur who in 2001 paid a reported \$20 million for a trip to the International Space Station (ISS) aboard a Russian Soyuz rocket. Tito’s trip came as Moscow’s space program was bleeding cash, leading Russia to throw open its doors to people with enough money to make the journey. Other space tourists followed Tito, including telecom entrepreneur Anousheh Ansari, video-game developer Richard Garriott and software billionaire Charles Simonyi (who, notably, is the only space tourist to have made repeat trips, flying in 2007 and again in 2009).

Now, with the rise of U.S.-based private space companies like Virgin Galactic, Blue Origin and Elon Musk’s SpaceX, civilians with a hankering to blast themselves into space no longer need to travel to the remote desert steppe of Baikonur, Kazakhstan, for a ride aboard a Russian rocket. It’s still early days for all three companies, none of which has announced formal plans for another civilian launch. But for Gates and other civilians dreaming of a trip to the stars, their ship may come in—and blast off—soon enough. “Jeff Bezos, Richard Branson, Elon Musk should make good on my ticket to the moon,” says Gates.

# Space

she'll take blood samples, for instance, to study the crews' microbiomes.

For all of the mission's ambition, there remains the question of whether civilian astronauts ought to be flying to space at all. For one thing, the notion that the Bezos, Branson and Inspiration4 flights represent a great opening of the space door assumes that everyone can afford the quarter-million dollars Branson charges or the \$50 million or so that the Inspiration4 seats probably cost. It's possible that costs will fall as the industry grows. But even if the price tag of a Branson mission were slashed by 80%, that's still \$50,000 for 10 minutes in space.

Then there's that matter of whether that money could be better spent on earth. Of course, any single dollar spent on any enterprise—Silicon Valley tech, auto manufacturing, sports stadiums—could instead be spent on humanitarian causes. Yet space, to many, feels more frivolous, and thus gets hit harder by critics. But some say the case against space spending doesn't hold up.

"These people—Bezos and Branson and Isaacman—aren't spending money on themselves," says John Logsdon, the founder of the Space Policy Institute at George Washington University. "They're spending money to create a business; these are business investments that create jobs and bolster the economy. If they're successful, they're risking their own money to build those businesses. Well, that's capitalism, right?"

**THERE'S ALSO THE QUESTION** of safety. Isaacman often points out that it took only 12 years after Charles Lindbergh's solo trip across the Atlantic before Pan Am introduced commercial transatlantic service. But physics has a say in this too. Commercial air service does not require the 4.9-mile-per-second speeds it takes to orbit earth, it does not regularly subject passengers to four g's, and it does not require passengers to climb atop the controlled bomb that is a Falcon 9 rocket. People have died in space; people have died merely trying to get to space—but always in the service of a larger scientific and geopolitical mission. If people die in the service of something that seems less noble, the space market as a whole could dry up as fast as the dirigible business did following the *Hindenburg* disaster.

That kind of mortal danger attends all space flights, but Isaacman and his crew seem to have already priced it into their thoughts about the mission. They say they are confident that the hardware they're flying will take them to and from space safely. And with good reason: the Falcon 9 rocket has been successfully launched more than 120 times, and while the Crew Dragon is a newer spacecraft, with only three crewed missions, it has flown admirably so far (Dragon has also flown more than 20 equally successful uncrewed missions).

"I have so much faith in our SpaceX team that



## SIAN PROCTOR, 51

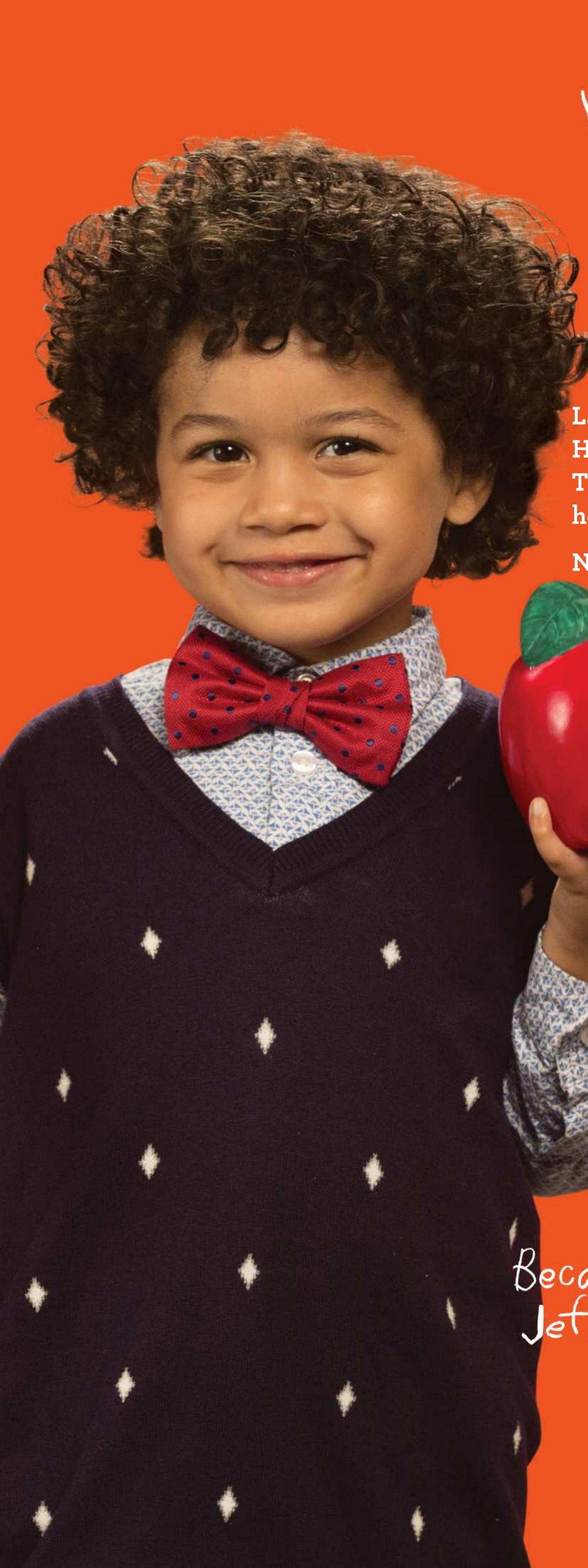
*Proctor has tried to get to space before, having applied to be a NASA astronaut. In 2009, she made it to the final 47 out of an applicant class of more than 3,500.*

I'm not nervous about a poor outcome," says Arceaux. "I've met the lead engineers for every aspect of our mission, and they know what they're doing. Inspiration4 is in wonderful hands."

Isaacman is equally confident. "You just accept there's a very, very low probability of something going wrong," he says.

He should know. He's come back from harrowing flying before—and space, he's convinced, is an order of magnitude safer than air shows. His concern, he says, is more about performance. If Inspiration4 won't in fact kick the door to space travel wide open, allowing the rest of us to pour through after, it can at least crack that door, coming just a little closer to normalizing rocket travel and democratizing space. For Isaacman, that carries with it not just a responsibility to his crew, but to history to get the mission right.

"I am constantly thinking about good execution," he says. "We have to fly well; we have to earn the right to be here." □



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I want to be a  
Teacher!

Last year, Sam was too sick to dream.  
He has Primary Immunodeficiency or PI.  
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he has been properly diagnosed and treated.

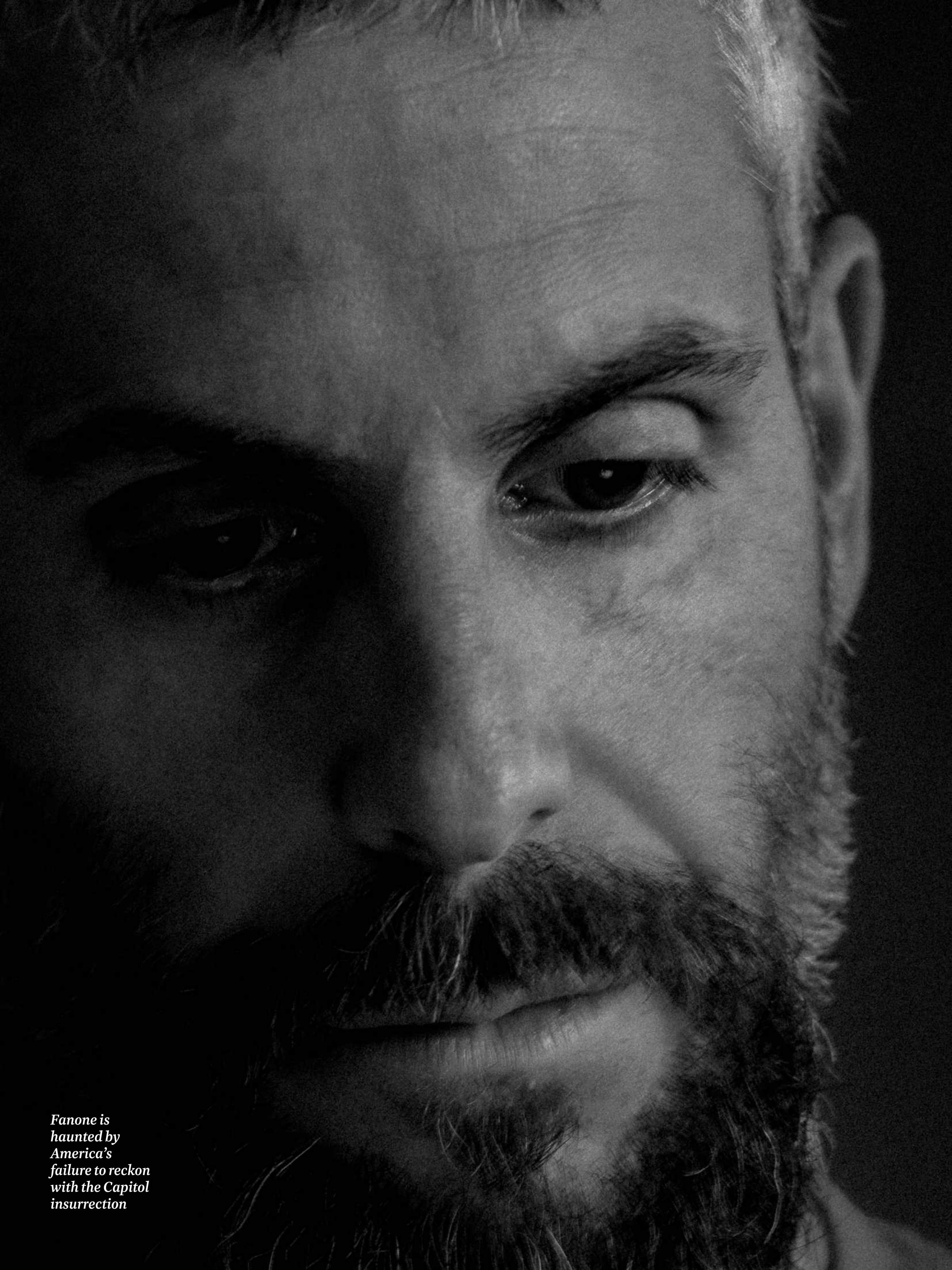
Now he's head of the class.

**jm** Jeffrey Modell  
Foundation

helping children reach for their dreams

[info4pi.org](http://info4pi.org)

Because of the  
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I have a chance! ♡



*Fanone is  
haunted by  
America's  
failure to reckon  
with the Capitol  
insurrection*

Nation

THE  
GOOD  
COP

*Officer Mike Fanone  
survived Jan. 6.*

*Then his trials began*

**BY MOLLY BALL**

# Nation

**I**T WASN'T A COP BAR; THAT WAS THE POINT. They weren't there to meet other cops. They were there to meet girls. The three police officers took seats at the wine bar in D.C.'s trendy Navy Yard neighborhood—exposed concrete walls, leather banettes, \$13 tuna tartare—and despite its being a wine bar, despite the Wednesday-night half-price-wine special, they ordered beers.

May 12, 2021, was a balmy night, and dozens of newly vaccinated young urbanites mingled out on the patio. At 10 p.m., the cops asked the bartender to put CNN on the TV.

"A true American hero, officer Michael Fanone," intoned the host, Don Lemon. "This is difficult to watch. But it is the truth of what happened that day. The truth—not the lies that you've been hearing." The screen filled with Fanone's body-camera footage from the Jan. 6 insurrection, airing publicly for the first time. "Officer Fanone is outside on the Capitol steps on the lower west terrace," Lemon said. "This is approximately 3:15 on that day."

Mike Fanone—wiry, bearded, his arms and neck covered in tattoos—nursed a Modelo at the bar and took it all in again. It had been four months since the day Fanone nearly died defending the Capitol—the day a self-described redneck cop who voted for Donald Trump was beaten unconscious by a mob waving Thin Blue Line flags and chanting "U.S.A." The day Fanone, a narcotics officer with the D.C. metropolitan police department (MPD) who'd planned to spend his evening shift buying heroin undercover, voluntarily rushed to defend the seat of American democracy and wound up in hand-to-hand combat with a horde hellbent on unstealing the election. The day Fanone was dragged down the Capitol's marble stairs, beaten with pipes and poles, tear-gassed and stun-gunned. The day he pleaded for his life as they threatened to shoot him with his own gun, telling the rioters he had kids, until they relented and spared him.

On the TV at the bar, Fanone's hand strained to push them away. The crush parted, and the full scene came into view: the grand terrace, the teeming crowd. Bodies upon bodies as far as the eye could see. Red hats and camo, Trump flags and American flags, all pressing forward, trying to break the cops' tenuous hold on the central door into the building. There is a thin blue line between order and chaos, and at that moment, Mike Fanone was it.

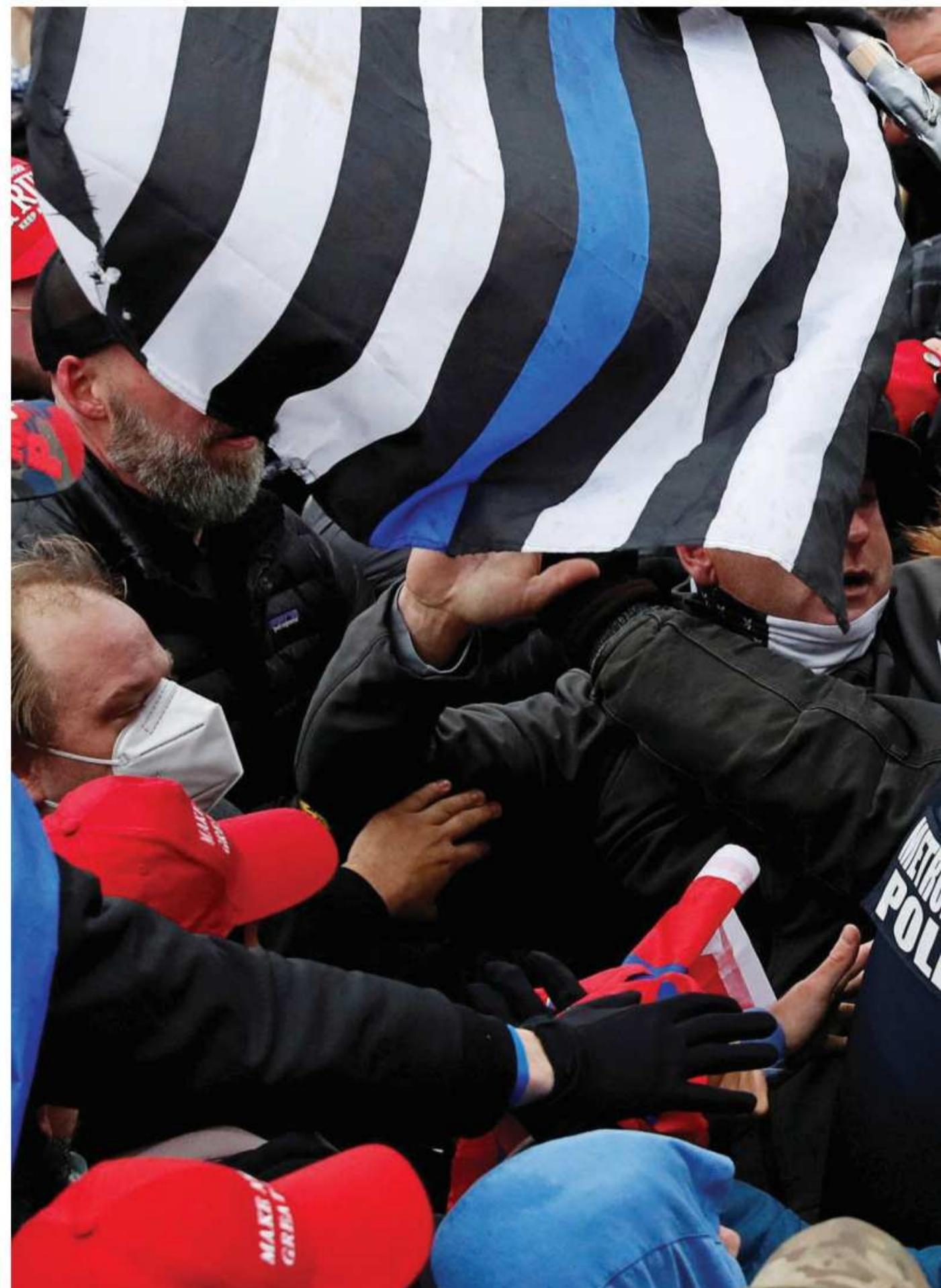
The footage showed Fanone getting pulled out into the scrum. A man's voice: "I got one!" Then Fanone began to scream the high-pitched, undignified screams of a man being tased in the back of the neck.

The bar fell silent as the body-cam footage played. And suddenly, for the first time since that day, Fanone was sobbing uncontrollably, shoulders heaving as his buddies put their arms around him.

Fanone—40, nearly broke, living with his mother,

## ^

**FANONE,  
IN UNIFORM  
AND  
HELMET,  
WAS NEARLY  
KILLED  
ON JAN. 6  
BY A PRO-  
TRUMP MOB  
WAVING  
"THIN BLUE  
LINE" FLAGS**



seeing ghosts, unable to return to duty in the only job he'd ever loved, possibly forever—had seen the footage a hundred times. But this was the first time he'd viewed it with other people, watched them witness what he lived through, see it through his eyes, feel his aggression, his valor, his abject terror. He sat there crying for a good 20 minutes. At some point he looked up and realized he was surrounded: everyone in the bar had come inside from the patio and gathered around him, watching the footage on the screen.

The months since Jan. 6 had not been easy for Fanone. Still recuperating from life-threatening injuries and posttraumatic stress disorder, he'd found himself increasingly isolated. Republicans didn't want him to exist, and Democrats weren't in the mood for hero cops. Even many of his colleagues didn't see why he couldn't just get over it. That very day, a GOP Congressman had testified that what had happened was more like a "tourist visit" than an "insurrection." But no one could see this footage, Fanone thought, and deny what really happened that day. History would be forced to record it.

This is the story of what happened after Jan. 6. This is Mike Fanone's story, recounted over weeks of searching conversations and corroborated by witnesses, public records and videotape. It is a story about



what we agree to remember and what we choose to forget, about how history is not lived but manufactured after the fact. In the aftermath of a national tragedy, we are supposed to come together and say “never forget,” to agree on the heroes and the villains, on who was at fault and how their culpability must be avenged. But what happens if we can’t agree? What if we’re too busy arguing to face what really happened?

“There’s people on both sides of the political aisle that are like, ‘Listen, Jan. 6 happened, it was bad, we need to move on as a country,’” Fanone tells me one recent afternoon on the well-kept back patio of his mother’s house, between long swigs from a beer can. It’s in a quiet exurban Virginia neighborhood, ranch houses alternating with McMansions, American flags flying over big green yards. “What an arrogant f-cking thing for someone to say that wasn’t there that day,” he says. “What needs to happen is there needs to be a reckoning.”

What makes a hero? Is it bravery, charging into danger to protect others?

Is it sacrifice, the damage sustained in the process? Or is it the man who refuses to let us forget?

**AFTER FANONE REGAINED** consciousness that day, he and his partner, Jimmy Albright, stumbled away from the Capitol to their patrol car, weaving like drunks from the chemical agents they’d inhaled. At one point Albright fell to his knees and vomited uncontrollably. They kept walking, arms around each other’s shoulders.

When they were almost there, Fanone said to Albright, “Dude, my neck hurts so bad.” He pulled down the collar of his black uniform, and Albright gasped: the back of his neck was covered in pink, splotchy burns.

“Dude, what happened?” Albright asked.

“Dude, they were tasing me,” Fanone said.

Albright took a picture with his phone to show Fanone what his own neck looked like.

Fanone drifted in and out of con-

sciousness as Albright drove to the emergency room. The security guard at the entrance told them they couldn’t go in without masks on. Albright pushed the guard aside, dragging his partner by the shoulders. At the intake counter, as a staffer was asking for his insurance information, Fanone collapsed on the floor.

The ER was jammed with a motley array of injured cops and rioters and COVID-19 patients. On the stretcher next to Fanone’s lay a rioter whose cheeks had been pierced by a rubber bullet at close range: it had gone in one side of his face and out the other. The doctors asked Fanone if he’d ever had heart problems, because his body was flooded with troponin, a chemical indicating cardiac distress. He’d had a heart attack, they told him.

From his hospital bed, he watched the news. On CNN, someone was questioning whether the police had used sufficient force to repel the rioters, asking why they hadn’t arrested more people on the scene. Outraged, Fanone looked up CNN, called the number that came up on his phone and told the woman who answered that Mike Fanone with the metropolitan police department needed to talk right away to that jerk on the air who was insulting the good name of every police officer.

“Sir,” she said, “this is the front desk.”

He burned to set the record straight, and he soon got his chance. A photo went viral in the days after the riot: Fanone in his helmet and tactical vest, face distorted in a furious battle grimace, the lone cop in a sea of rioters, Thin Blue Line flag waving ironically over his head. His ex-wife, the mother of his three youngest daughters, proudly posted his name on social media, and suddenly everyone seemed to have his number.

The following week, at his urging, the department set up a round of interviews with the Washington Post and major TV networks. Fanone, one of several officers authorized to speak to the press, was the star of every segment. “They were overthrowing the Capitol, the seat of democracy, and I f-cking went,” he said, neck tattoos peeking from his collar. He was pugnacious, funny, charismatic, unfiltered. The battle, he quipped, felt like the movie 300, “except without the six-pack abs, which none of us have.”

Perhaps most indelibly, Fanone offered his take on the rioters who’d heeded his

# Nation

pleas for mercy. “A lot of people have asked me my thoughts on the individuals in the crowd that helped me,” he drawled. “I think the conclusion I’ve come to is, like, thank you”—here he paused and squinted—“but f-ck you for being there.”

The response was overwhelming. Thousands of letters, tens of thousands of emails, poured in to the MPD. Men wanted to thank him. Children said they looked up to him. Women swooned. (Fanone turned down a request to pose nude in *Playgirl*.) Liberals posted worshipful memes. Joan Baez, the singer and activist, made an oil painting of his face and captioned it: “Thank you, but f-ck you for being there.” At a gas station at 5 a.m., an elderly Black woman walked up and said, “Are you Michael Fanone? Can I hug you?” and burst into tears as he held her in his arms.

People were hungry for heroes, hungry for a sliver of humanity in the ugliness and violence. Here was the brave cop who rushed into danger and put his life on the line for his country. He was embarrassed by the attention, but it also seemed right on some level, like America agreed that what happened at the Capitol was an attack on all of us, like we were coming together to denounce the bad guys and lift up the good.

But the story was only beginning.

**THE HOUSE** of Representatives initiated impeachment proceedings against Trump for inciting the riot, and the Democratic lawmakers managing the impeachment reached out to Fanone for help putting together their case. He met House Speaker Nancy Pelosi and shocked her with his foul language. On Jan. 13, 10 Republicans joined the Democrats in voting to impeach Trump for a second time. Fanone called each of their offices to thank them.

The 10 Republicans invited him to meet at the Capitol Hill Club. They hailed his heroism—and told him they feared they’d just ended their political careers. Death threats were pouring in from their pro-Trump constituents. Right-wing activists were lining up to unseat them in primaries. It didn’t make sense to Fanone that there were only 10 of them. Hadn’t all the

members of Congress been there that day? Hadn’t they fled the chamber in terror as he and his colleagues held off the mob? The Republicans told him that plenty of their colleagues privately agreed Trump was to blame, Fanone says. But they didn’t want to commit political suicide.

At the same time, Fanone had questions about the investigation into the assault he suffered. MPD detective Yari Babich had been assigned to the case, but Fanone learned Babich had posted a bunch of nasty comments on social media about Fanone’s media tour—calling him an egomaniac, a celebrity wannabe, unprofessional, a buffoon. Fanone complained to the department but says he was told Babich was entitled to his opinion. (In response to a detailed list of written questions, the MPD declined to comment on this or other aspects of this story. TIME was unable to reach Babich for comment.) He kept complaining, and eventually Babich was taken off the case,

carried him through Jan. 6 and the immediate aftermath started to wear off. His phone stopped ringing. He wanted to go back on TV and respond to the lies Trump and his acolytes were telling, but the department’s public-information officer told him the mayor’s office was not authorizing any more interviews.

Fanone’s head hurt constantly. Everything seemed to be rushing at him all the time; he needed to be somewhere quiet. The doctors told him he had PTSD. He’d be going about his day, and suddenly the idea that he would be better off dead would appear in his mind. He didn’t know how to shake it. Then it would just as suddenly be gone, until it came back again.

Anger alternated with self-doubt. He kept watching the video footage, but instead of feeling proud, he started picking it apart. The famous photo—what if what people saw on his face was not bravery but fear? How had he let himself get pulled into the crowd, away from the group? Was it his fault? What more could he have done?

In February, Fanone and a couple of other officers were invited to the Super Bowl. The police chief persuaded him to go on behalf of the department, telling him it would prove that the nation could still rally around law enforcement. The officers were told there would be a ceremony at halftime, Fanone says—a solemn procession of honor and reverence, the sort of thing we do to create heroes in America. But at the last minute, the officers were told to leave their uniforms at home.

While the game featured elaborate tributes to health care workers and to racial justice, the cops got only a brief callout from the announcers as they were shown in their box midway through the third quarter. (The NFL denied the officers were promised an on-field ceremony.)

**HE WAS A GOOD COP**—one of the best. Fanone was born in the District and raised in Alexandria, Va., his father a lawyer, his mother a social worker. They divorced when he was 8. His dad was a partner at a big firm, but Fanone hated the stuffy status-grubbing of fancy-pants D.C. He spent his free time with his mother’s



**FANONE TESTIFIED ON JULY 27 BEFORE THE HOUSE SELECT COMMITTEE INVESTIGATING THE SIEGE OF THE CAPITOL**

according to law-enforcement officials familiar with the matter. But cops gossip like hens, and Fanone knew that if one guy was talking this way he probably wasn’t the only one. Fanone had thought that in telling his story he was speaking for all of them, helping them get the recognition they deserved. What if other cops didn’t see it that way?

After two weeks, the adrenaline that

working-class family in rural Maryland, boating, fishing, crabbing, hunting and watching John Wayne movies. “Michael was a cowboy from the time he was 3 years old,” says his mother Terry Fanone.

Attempts to smuggle the self-styled backwoods boy into the professional class were unsuccessful. He spent a year at Georgetown Prep, the private school whose alumni include two U.S. Supreme Court Justices, but was asked not to return. When his parents sent him to boarding school in Maine instead, he saved his pocket money and bought a bus ticket back home. After his parents kicked him out, he got a job working construction and eventually completed his high school diploma at Ballou, a nearly all-Black public school in southeast D.C.

Fanone joined the Capitol Police shortly after 9/11, but he knew by the time he finished at the academy that he didn’t want to spend his career there. Fanone and his buddy Ramey Kyle would drive down to the projects on their lunch break and chase drug dealers, to management’s chagrin. “We were 21-, 22-year-old adrenaline junkies—we wanted to run and gun,” Fanone recalls. After a couple of years, he and Kyle both moved to the MPD.

Fanone loved the job—the thrill of it, the intensity, the brotherhood of officers. He recalls the rush of pulling up to the projects and watching people scatter. Gradually he honed his skills, working with informants, establishing probable cause, liaising with federal agencies on wiretap cases and big busts. He studied local defense attorneys and relished sparring with them on the witness stand. “He went from being this wild and crazy, reckless guy—that was his image at the beginning—to thinking things out and planning ahead and being meticulous,” says Jeff Leslie, who was Fanone’s partner for more than a decade. “Mike is the best narcotics officer I’ve ever worked with, including FBI and DEA.”

At some point in his 30s, Fanone realized there was more to life than the job. His mentor, someone he thought of as a living legend, retired, and there were no parades—the department just carried on without him. Fanone stopped volunteering for overtime and re-established contact with the teenage daughter he barely knew. He got married, had three more daughters, got divorced.

He wasn’t interested in politics—it

should be, he thought, like the Olympics, something to gawk at every four years and then put away. But for a white cop who spent his time policing Black neighborhoods, politics became harder and harder to ignore. He hated the way liberal politicians and the media always made police the bad guys. After the 2014 death of Michael Brown in Ferguson, Mo., people seemed to assume every cop was like Darren Wilson, the white officer who shot Brown. Of course there were bad cops, but they weren’t all like that. The city council kept making new rules about what they could and couldn’t do. He did his best to follow the blitz of reform-minded dictates from above: community outreach, sensitivity training, de-escalation. He took to heart the ideas about better rather than more arrests, he says, only to be penalized for not arresting enough people. Tired of antipolice sentiment and feeling a bit of kinship with the bombastic, abrasive politician, Fanone voted for Trump in 2016.

But with Trump in office, policing in America only became more fraught. Jeff Leslie spent the summer of 2020 working 12-hour days at the George Floyd protests in D.C., standing stoically on the sidelines as white kids from the suburbs spat in his face and called him a racist. The very first day, a brick went through his cruiser window and a Molotov cocktail nearly lit it on fire. “I said to some of these white guys in antifa gear, ‘Look, you’re more educated than me, and I do believe you care about Black people,’” Leslie recalls. “‘Let me take you down to the hood and show you how you can really invest in some young Black lives.’” The law-abiding citizens of those neighborhoods weren’t calling to abolish the police, Leslie says; they told him they wanted more police to clean up their community. None of the protesters ever took him up on his offer.

Leslie was there on Jan. 6. He was in the battle with Fanone and got hit with hammers. But he’s suspicious of Fanone’s new liberal friends. “I love the guy, and I’m concerned that all those people are using and manipulating him,” Leslie says. “He’s always wanted us to be respected and appreciated for what we do, and it’s never going to happen. We’re never going to get a parade. No one cares. Now all these people want to use him against Trump. But these are still the same people calling us white supremists

and saying we should be defunded.”

Fanone shares that worry: “If I didn’t speak out against Trump, would people think I was just another evil white cop?” What he hoped to make people understand was that he wasn’t some exceptional “good cop”—he was every cop. The worst kind of cop: the arrogant adrenaline junkie. And the best kind of cop: meticulous, humane, committed. Maybe the liberals who supported him would see they ought to support the others too—the hundreds who answered the call at the Capitol; the thousands who rush into danger every day for the sake of their ungrateful asses.

Because Fanone was just like every other cop. Unless, after Jan. 6, he wasn’t.

**ANDREW CLYDE**, a first-term Republican representing Georgia’s Ninth District, witnessed more of the Jan. 6 chaos than many of his colleagues. Around the time Fanone was getting tased on the Capitol terrace, as most members of Congress were being whisked to safety, Clyde, a 57-year-old former Navy aviator and gun-shop owner, bravely helped barricade the door to the House chamber as rioters massed outside.

Yet Clyde soon became a case study in the GOP’s determination to forget. On May 12—the day Fanone broke down at the bar—Clyde insisted in a House hearing that the footage from Jan. 6 resembled a “normal tourist visit” more than the coup attempt liberals portrayed.

Something broke open inside Mike Fanone when he heard Clyde’s comments. His courage, his fists, his neck, had kept these guys from being strung up, and now they wanted to pretend it never happened? How could they deny it when it was all right there on video? Fanone couldn’t let these cowards keep twisting the facts. The department’s press officer had stopped answering his calls. He didn’t care. He’d gone rogue.

But the Republicans weren’t the only ones who wanted to put Jan. 6 behind them. A new President had taken over, promising to heal the nation’s wounds, and the public had turned its attention to the future: the pandemic ebbing, Congress passing laws. Fanone wrote a letter to every politician he could think of, demanding to know why the officers who fought that day hadn’t been recognized. The White House acknowledged the letter but never got back to him; the

mayor's office did not respond. (A spokesman said the White House was still in the process of responding to Fanone's three-month-old letter. The mayor's office noted that the officers were subsequently honored at an employee-appreciation ceremony.)

Fanone's new political friends told him not to take it personally. That President Biden was trying to "lower the temperature" in the country. That D.C. Mayor Muriel Bowser couldn't be seen as too pro-police in the current political climate. He wasn't being slighted, they told him; he was just politically inconvenient.

In Congress, official honors for police who defended the Capitol were caught up in legislative squabbling. The Senate voted in February to award the Congressional Gold Medal to Capitol Police officer Eugene Goodman, who'd led a mob away from the Senate chamber as Senators evacuated. But the House wanted to give medals to all the officers who were there. Months of back-and-forth ensued.

Democrats and Republicans feuded over how to investigate Jan. 6. Bipartisan negotiations to establish an independent, 9/11-style commission looked promising until the House and Senate GOP leaders, Kevin McCarthy and Mitch McConnell, torpedoed the talks. In the days after the riot, McCarthy had said Trump bore responsibility for it and McConnell had passionately denounced him. Now they had an upcoming election to worry about.

On June 15, the House finally passed legislation awarding gold medals to the Capitol Police and MPD for their valor on Jan. 6. Twenty-one Republicans voted against it, including Clyde. Fanone decided to pay each of them a visit. He and Capitol Police officer Harry Dunn, a 6-ft. 7-in. Black man who'd spent Jan. 6 herding rioters on an interior staircase as they hurled racial slurs, went to each of the 21 lawmakers' offices, politely requesting to schedule appointments. But the only one they met that day was Clyde.

Fanone spotted him getting into an elevator, and he and Dunn followed Clyde in. "How are you doing, Congressman?" Fanone said as the doors closed, putting out his hand.

Clyde shrank away. "You're not going to shake my hand?" Fanone said.

"I don't know who you are," Clyde said. "I apologize," Fanone said, and

launched, for the umpteenth time, into his practiced spiel. "My name is Michael Fanone. I'm a D.C. metropolitan police officer who fought on Jan. 6 to defend the Capitol, and as a result I was significantly injured. I sustained a heart attack and a traumatic brain injury after being tased numerous times at the base of my skull, as well as being severely beaten."

Clyde turned away and started fumbling with his phone. The elevator doors opened, and he bolted. (Clyde later issued a statement acknowledging the elevator encounter but said he did "not recall [Fanone's] offering to shake hands.")

Fanone called his new friend Eric Swalwell, a Democratic Representative from California, and told him what had just happened.

"What do you want me to do?" Swalwell asked.

"Tweet it, motherf-cker!" said Fanone, who eschews social media.

Swalwell and another friend, Republican Congressman Adam Kinzinger, both tweeted about the incident. Fanone went on television and called Clyde a "coward." The story was all over the news. He had fought back against the lies with the force of his truth, and for a moment, he believed he had won.

**BUT THE ROT** was setting in—the fatigue, the forgetting, the whitewashing. Trump claimed that Jan. 6 was not a riot but a "lovefest," that the rioters' interactions with police that day were more like "hugging and kissing." Newsmax did a segment portraying Fanone as a mentally ill anti-Trumper; one of the network's anchors called him a "crybaby" and an "unhinged gangbanger." QAnon zealots in private forums whispered that he was a paid actor, not a cop at all. Republican Congressman Paul Gosar called the police shooting of Ashli Babbitt—a rioter who was attempting to force her way into the Speaker's Lobby off the House floor—an "execution." Polls showed that more and

## Fanone's mission to defend his colleagues' actions has morphed into something bigger and more daunting

more Republicans saw the attack on the Capitol as a display of patriotism.

In meetings with GOP members of Congress, Fanone asked how they could claim to "back the blue" while selling him out. They brought up Black Lives Matter and how they'd had the cops' backs. "You guys don't seem to have a problem when we're kicking the sh-t out of Black people," Fanone recalls saying. "But when we're kicking the sh-t out of white people, uh-oh, that's an issue." He found himself explaining why attempting to overthrow a CVS was slightly different than attempting to overthrow the government. Why the peaceful transfer of power was a bigger deal than a few anarchists in Portland, Ore.

Conservative pundits quibbled with the riot's body count, pointing out that Capitol Police officer Brian Sicknick, who died the day after he helped fight off the rioters, had technically passed away of "natural causes" after a series of strokes. Fanone had gone to the Capitol to see Sicknick's body lie in honor, buying his only suit for the occasion. He'd gotten to know Sicknick's mother and girlfriend. (All of them, incidentally, were Trump voters.) *Is that what they'd be saying if I didn't make it?* Fanone wondered. That he'd died of a heart attack? That it wasn't Trump's fault, just "natural causes"?

Fox News hosts invented other explanations for the violence: antifa provocateurs, FBI infiltrators. Tucker Carlson called Dunn "an angry left-wing political activist" who could not "pretend to speak for the country's law-enforcement community." Fanone wanted to go on Fox News to argue but, he says, a booker told him there was a networkwide ban on his appearing. (A Fox News spokesperson denied this.)

Much as he hated to admit it, Fanone was starting to suspect Carlson had a point. Maybe officers like him and Dunn, who wanted Trump held accountable, were the exception. Watching the body-cam footage again, he noticed how many cops were standing around, kibitzing with the rioters. He thought of his MPD colleagues: out of more than 3,000 on duty, about 850 had responded to the Capitol. What about all the others?

Where was his backup? Where was the police union, which rushed to the defense of any officer criticized by left-wing politicians? The Fraternal Order of Police



#### HOUSE GOP LEADER KEVIN MCCARTHY, CENTER, AND HIS COLLEAGUES HAVE TRIED TO DISTORT THE TRUTH ABOUT JAN. 6

FOP's free wellness program. (In an interview, Yoes said the FOP hopes to work with Fanone and his local union to resolve his complaints. "I see his struggles, I see he is dealing with a lot, and he may have some misconceptions about it," Yoes says, "but I assure you we have been there for him and will continue to be.")

At the end of the meeting, the D.C. lodge voted to endorse Yoes for another term as union president.

**HEALED FROM** his physical injuries but still on mental-health leave, Fanone now spends most days alone. He goes to the gym, takes care of his daughters part time, fields media calls. He probably can't go back to undercover work, and he wonders if he'd be safe going back on the job at all. Colleagues he's known for decades don't talk to him anymore. Guys who never called to check in when he was in the hospital send him taunting memes about his liberal-darling status.

"I had convinced myself, Mike, you're vocalizing the opinions of thousands and thousands of police officers. But I'm starting to think I'm vocalizing the beliefs of

just one," Fanone says one day over lunch, as his three young daughters dig into their chicken tenders. "While there are still some officers that are very supportive of me, I can count them on one hand. The vast majority of police officers—would they have been on the other side of those battle lines?"

His mission to defend his colleagues' actions had morphed into something bigger and more daunting. What he had to do, he concluded, was not just to speak up on behalf of law enforcement. He needed to shake his fellow Americans out of their Trump-induced delusions, debunk the lies that had poisoned his friends' minds. He needed to root out the hatred that led to Trump in the first place.

"The greatest trick in history was Donald Trump convincing redneck Americans that he somehow speaks for them," says Fanone, who includes himself in that category. "He will destroy this country simply for the sake of his ego, just because he can't accept that he lost an election."

In late July, Fanone was one of four officers who testified at the first hearing of the House committee investigating Jan. 6, a proceeding that just two Republicans took part in. "The indifference shown to my colleagues is disgraceful," he cried, pounding the table. A Fox News anchor joked that he should get an Oscar for acting. His

(FOP), which endorsed Trump in 2016 and 2020, had issued a lukewarm statement on Jan. 6 urging "everyone involved to reject the use of violence and to obey the orders of law enforcement officers to ensure that these events are brought to a swift and peaceable end." Numerous active-duty FOP members have since been charged in connection with the riot. In at least one case, the union is trying to keep an accused rioter from being fired by his department.

There was an FOP meeting on July 14, and Fanone and Dunn decided to attend. Fanone arrived with specific demands. He wanted a public condemnation of the 21 Republican lawmakers who'd voted against the gold medals. He wanted Clyde and Gosar condemned specifically, and he wanted the officer who shot Babbitt defended as forcefully as the FOP had defended officers who shot Black citizens in the past. Fanone addressed the FOP's national president, Patrick Yoes, an ardent Trump supporter. "You are doing a disservice to your membership by not speaking the truth of that day," Fanone said. "You have an opportunity to educate Americans—not just police officers but Americans—about what actually happened, and you're not doing it."

Yoes bristled. He told Fanone the only thing he could offer was access to the



voice mail filled with threats and mockery. “I wish they would have killed all you scumbags,” one caller said. Others threatened to rape and kill his mother and daughters. Trump reportedly called Fanone and the other officers “pussies.” Two days after the hearing, another cop Fanone knew who’d been there on Jan. 6 died by suicide—the fourth to take his own life since the riot.

For most Americans, Jan. 6 keeps getting further away. For Fanone, it’s still the only thing—the day his life stopped. And yet, as awful as it was, he’s grateful for it. “That’s, like, difficult to come to terms with. What if I had not gone through that?” he says. “I’d be the same dumbass that I was on Jan. 5. Not evil in my motivations. But ignorant to the truth.”

And so he keeps telling his story—the story of what really happened that day.

**ON THE MORNING** of Jan. 6, 2021, Mike Fanone woke up early, as usual, and went

to the gym. He’d been living with his mom since a breakup left him with an apartment he couldn’t afford, working a second job at a security consultancy, saving for a down payment on a house for him and the girls—Piper, 9; Mei-Mei, 7; and Hensley, 5. Terry went to her prayer group, and when she came back she told her son she’d had a funny feeling and said an extra prayer for him.

Fanone’s shift was scheduled to start at 2:30 p.m. His plan for the day involved a heroin buy at the James Creek public housing project in southwest D.C. The buyer would be a longtime informant whom Fanone considered a friend, a 68-year-old Black transgender woman named Leslie. (Leslie, who suffered from cancer, AIDS and various addictions, has since died, which Fanone learned because he was listed as her emergency contact.) But shortly after noon, seeing what was

happening in the news, he called off the buy and drove to the station instead.

Things were getting hairy. He had just hit the 14th Street Bridge when he heard the commander on the scene say on the radio that the department had run out of chemical munitions such as tear gas and pepper spray—not just what it had on hand at the Capitol but the whole department’s supply. In all his years on the job, that had never happened. A call went out requesting aid from surrounding jurisdictions.

At the station he met Albright, who was changing into his uniform. “What do you want to do?” Albright said.

“We’re going to go,” Fanone said. “Get us a vehicle.” He went to his locker and took out the uniform he’d never worn before, still in its plastic wrapping. He grabbed a tactical vest, a radio, a body camera, a helmet and a gas mask.

In the parking lot, a sergeant was tossing car keys to anyone volunteering to go



**FANONE AT  
HIS MOTHER'S  
HOME IN  
ALEXANDRIA, VA.,  
ON JULY 28**

to the Capitol. They parked a couple of blocks away. Fanone couldn't figure out how to attach the gas mask to his vest, so they both left their masks in the car. It was eerily quiet as they approached the building on foot, passing abandoned police cars and barricades. Albright pointed out a trail of blood on the ground.

They went in the south entrance and made their way to the columned chamber known as the Crypt, lined with historic statues and a replica of the Magna Carta. A couple of dozen trespassers were milling about. As the partners tried to figure out where to go, a 10-33 call—officer in distress—came over the radio from the west front of the Capitol. They went.

Some rioters had gone around and trickled in through other windows and doors, but it was this entrance, facing the White House, where most of the mob was trying to force its way in. Fanone and Albright came upon a narrow, stone-walled tunnel choked with clouds of gas. A commander in a gray coat was hunched over, retching, trying to wipe the tear gas from his face. Fanone saw that it was his friend Ramey Kyle. A dull roar was getting louder as they approached. "Hold the line!" Kyle shouted over the din.

Fanone and Albright went into the tunnel. The floor was slick with vomit. About 30 officers were pressed against a pair of brass-bordered double door-jambs, four or five abreast, several rows deep. The ones in front strained to push the crowd far enough from the doors to yank them closed, trying to lock their plexiglass riot shields together. But the rioters had managed to tear some of the shields away and were beating the cops with them.

From the back, Fanone and Albright could see the officers were ragged: injured, bleeding, blinded, fatigued. Some had been there for hours. They could also see that if the line broke, they would be trampled in the narrow tunnel, and the rioters would overrun the building. This was the last line of defense.

"Let's get some fresh guys up front!" Fanone yelled. "Who needs a break?" Some officers pointed at colleagues they thought needed relief, but nobody volunteered to come off the line.

What makes a hero? Is it bravery? Is it sacrifice? Or is it the man who refuses to let us forget?

"C'mon, MPD, dig in!" Fanone yelled, bracing his hands against the other officers' backs. "Push! Push 'em the f-ck out!"

He and Albright got to the front. It was only then that they looked out on the sea of people for the first time and saw what they were up against. The rioters were coordinating efforts, yelling "Heave! Ho!" and lunging in rhythm.

An officer yelled, "Knife!" and Albright turned to his left, away from Fanone, to grab the weapon. When he turned back Fanone was gone.

He was out in the crowd, surrounded by rioters. They dragged him face first down the stairs and

punched and kicked and beat him. They ripped off his badge and took his radio. One kept lunging for his weapon. Someone was yelling, "Kill him with his own gun!" Fanone felt an excruciating pain at the base of his skull—the Taser—and cried out, but he couldn't hear himself scream. The rioters seemed intent on torturing him. He thought about pulling his gun. He would be justified in defending himself, but then what? He thought of his daughters. He didn't want to die. "I've got kids!" he cried.

A couple of rioters surrounded him, fighting off others. "Bring him up, bring him up," one said. "Don't hurt him," said another. "Which way do you want to go?"

"I want to go back inside," he whimpered, and that's the last thing he remembers. The rioters lofted his limp, unconscious body to the doorway—the battle line. Albright grabbed him and pulled him back through the phalanx.

One of the officers carrying Fanone back into the hallway shouted, "I need a medic! Need an EMT, now!" Albright followed, crazed with fear. "I got it. It's my partner!" he yelled. "Mike, stay in there, buddy. Mike, it's Jimmy. I'm here."

What does Mike Fanone deserve? A parade? A key to the city? The cops' equivalent of a Purple Heart? He's not asking for any of that. He's not asking to be called a hero—he just wants us to remember what his sacrifice was for. Fanone believes we can't keep trying to outrun this thing; we've got to turn around and face it, defeat it once and for all. That if all we do is turn away and hope it fades, it will just keep getting stronger until it comes back to kill us all.

Fanone has gotten none of those traditional heroes' honors. None of the officers have. But perhaps that's normal. Perhaps we always fail our heroes: the veterans who sleep in the street, the whistle-blowers languishing in penury. Perhaps all the medals and ceremonies are our constant, insufficient attempt to atone. But we can never be grateful enough. For our comfort, for our safety, for our freedom.

They laid him down on a luggage cart—there were no more stretchers, no more ambulances. "Take his f-cking vest off, man. He's having trouble breathing," Albright said frantically. He took Fanone's gun so that he wouldn't come to and instinctively reach for it, thinking he was still out in the crowd.

"C'mon, Mike," Albright pleaded. "C'mon, buddy, we're going duck hunting soon."

"Fanone, Fanone," another officer said. "You all right, brother?"

The world swam blurrily back into view.

"Did we take that door back?" Fanone asked.

They took back the door. They defended the Capitol. That is the story Mike Fanone won't let us forget. —With reporting by VERA BERGENGRUEN, MARIAH ESPADA, NIK POPLI and SIMMONE SHAH

Environment

# Life and Death in a Hotter World

The parched, burning U.S. West signals a grim future

BY JUSTIN WORLAND

PHOTOGRAPHS BY  
ADAM FERGUSON FOR TIME

## PAGE, UTAH

Keethan Tsosie, 9, swims off Lone Rock Beach in Lake Powell while visiting from the Many Farms, Ariz., area of the Navajo Nation on June 12. Hovering at around just 32% of capacity as of Aug. 10, America's second largest reservoir has reached a low unseen since it was filled in 1969. In the past year, the water level dropped some 52 ft.







**T**HE AUG. 9 WARNING FROM THE U.N. Intergovernmental Panel on Climate Change (IPCC) couldn't be more clear: the reality of climate change is unequivocal, its effects are already playing out in every region of the planet, and we need to act now before the outlook gets worse. In a 4,000-page report, the U.N.'s climate-science body laid out in methodical detail the ways in which human activity has set life on the planet on a collision course. Today, the effects of climate change are already pervasive; if we continue to emit greenhouse gases at current rates, the effects of climate change will be catastrophic and irreversible. "Recent changes in the climate are widespread, rapid and intensifying—unprecedented in thousands of years," says Ko Barrett, a vice chair of the IPCC.

It's a revelation both shocking to read and perhaps painfully obvious for the countless people who are already feeling the effects—from Germans whose homes were wiped away by floods this year to farmers suffering from ongoing drought in Central America. In the U.S. the nascent climate crisis appears most dramatic in the West, where a combination of drought and extreme heat has created life-threatening conditions.

## PALM SPRINGS, CALIF.

On June 18, Jill Langham and her friend Geoffrey-Martin Cyr planned to have drinks together in the evening. The desert city was experiencing a heat wave: for 43 consecutive days in June and July, temperatures hit 100°F or higher. The soles burned off Langham's shoes that day, on which the high was 119°F. Cyr planned to lie out near a pool before meeting up. At close to 5 p.m., he texted to say he was "winded" but on his

way. He never arrived. Langham didn't think much of his absence—their plans were casual, and they were due to have brunch that weekend anyway. She later learned Cyr, 55, had collapsed and was transported to a hospital, where he died the next day from complications of heatstroke. "I really wish I had sent him a photo of those [shoes] and said, 'Hey, be careful out there,'" she says. "Would he have listened? He was a sun worshipper."



TIME sent photographer Adam Ferguson on the road across six Western states—from Arizona to Washington—for more than five weeks in June and July to document how climate change is shaping life on the ground. He captured images of empty reservoirs and families who lost loved ones to unbearable heat. He encountered farmers worried about watering their crops and saw the devastation left by wildfires. It's a searing warning from a particularly iconic region on a planet that is, in so many places, on fire, parched or underwater.

The IPCC report, a collaboration among 234 authors, cites more than 14,000 studies and references, covering all the shifts that are occurring in the environment, from the way water circulates to the level of moisture in soil. At the core of all these changes is heat. Global average temperatures have ticked up about 1.1°C since the Industrial Revolution, according to the IPCC, but that seemingly small number obscures the enormous and immediate spikes in temperature in particular places.

Heat waves that bring high temperatures that extend for days have become more frequent, and some areas, particularly vulnerable regions like the Arctic, are warming faster than others. These higher

## GOODYEAR, ARIZ.

Jody Marquess, 43, looks at the recliner where his stepfather John Ramer died on June 17. It was Marquess's birthday, but he was concerned about the 69-year-old, who eschewed air-conditioning. "He had tough-guy syndrome," Marquess says, recalling a "stubborn" and "very frugal" but also "honest and simple" man. When Marquess stopped by that day—the high reached 115°F—he installed a portable AC unit for Ramer, who was sleeping. Two hours later, when he returned to drop off ice cream, Ramer was dead. From April through July, Maricopa County confirmed 47 heat-associated deaths, more than triple the figure confirmed by the end of the same period last year. Marquess had long wondered if this was how Ramer might die in Arizona: "I just didn't think it was going to be this soon."

*This project was supported by the Pulitzer Center*





temperatures have a range of trickle-down effects: an altered jet stream, more intense drought and even increased precipitation, to name a few.

Any one of those ripple effects would create serious problems if it struck on its own, but when multiple ones land at the same time, the result is exacerbated. That's what is happening right now in the Western U.S., where residents are experiencing what the IPCC has called a "compound extreme event." Heat has evaporated the water supply for farmers and ranchers—not to mention local communities. States have reported hundreds of excess deaths as bodies collapse without air-conditioning in unmanageable temperatures. And heat has led to drought, which has dried up forests and created tinder for wildfires.

"It's the combination of heat waves, drought conditions and also windy conditions that allow fire propagation," says Paola Andrea Arias Gómez, an IPCC co-author and associate professor at the school of the environment at the University of Antioquia in Colombia. That's led to record numbers. Last year California experienced the worst fire season on record; this year the state has experienced nearly three times the acreage burn compared with the same point in 2020.

The U.S. West is not alone in inhabiting dire climate straits. For the first time, the IPCC this year

### EL DORADO HILLS, CALIF.

Boat docks rest on the floor of Folsom Lake, a reservoir on the American River in the Sierra Nevada foothills about 25 miles east of Sacramento. As the state's ninth largest reservoir, Folsom serves as a vital source of drinking water for millions and irrigation for the Central Valley, which produces one-fourth of the food consumed in the U.S. On June 30, as California ended one of its driest rain seasons on record,

the reservoir registered just 30% of its capacity. "This drought is real. Climate change is real," Governor Gavin Newsom said three weeks later, standing bone dry in what in typical years would have been waist-deep water. "If you don't believe in science, please, you've got to believe your own eyes." By Aug. 10, with nearly half the state classified as experiencing "exceptional drought"—the highest level used by the U.S. Drought Monitor—the water had dropped 6% more.

offered a comprehensive analysis of climate change at the regional level. Every region on the planet has already taken a hit from warming in one form or another, according to the report. In places where people are already facing devastation, the scale of the climate-changed reality is starting to seep in. In the air-conditioned Oregon Convention Center in Portland, Dennis Henry, 71, tells TIME that he would consider moving if the heat waves became a regular occurrence. Henry had taken shelter in the cavernous meeting hall—a temporary fix, he acknowledges. “If the situation became extreme, where this was semi-normal … no, I wouldn’t be here,” he says. But at the same time, “I can’t plan where to move, because who knows what they’re going to be like.”

Policymakers from around the globe are currently gearing up for global climate talks meant to put the world on track to keep temperatures from rising more than 1.5°C by the end of the century. The IPCC report “will give ammunition to those of us who are saying this is a crisis,” says Nat Keohane, president of the Center for Climate and Energy Solutions. But so too should the stories of those on the ground who already have lost homes, livelihoods and loved ones.

—With reporting by ADAM FERGUSON, ANDREW KATZ and JULIA ZORTHIAN □

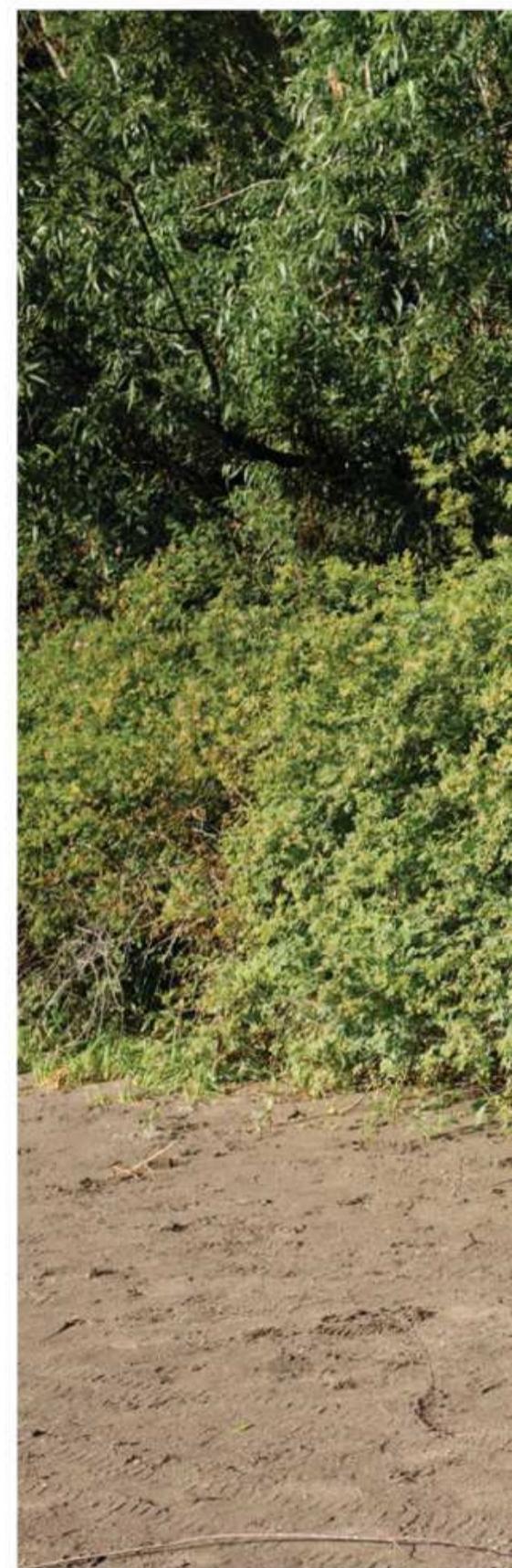
## SYCAN ESTATES, ORE.

Jeff Whited sits among his destroyed belongings on July 22. The Bootleg Fire—which for a time was America’s largest of the year, scorching over 413,000 acres and generating its own weather—arrived “just like a freight train,” says Whited. “It looks like a freaking bomb went off.” The 63-year-old had been helping clean up the wreckage of his brother’s burned-down house when flames reached his own. Guitars and amplifiers, snowmobiles and trucks, engine parts,

chain saws, a huge cache of hand tools and much more—all gone, Whited says. “This sure was a beautiful place,” he says. “It doesn’t leave a beautiful memory with me, not this picture of it.” At the grave of his partner on his 12-acre property, wind chimes used to hang in the trees. Whited recalls asking why she wanted so many of them, to which she replied, “When I’m gone, baby, you’ll know I’m still there when you hear ‘em.” After the fire, he says, “I can’t hear one. They’re gone. Every wind chime.”









### NEAR CENTRAL, UTAH

Farmhand and local watermaster Richard Crockett checks the level of a canal on June 10. "Our water situation has never been this bad," says Crockett, 78. "Right now, everybody's praying for rain. But the forecasters say we're not going to get any," he adds. "Most farmers and ranchers in this area are facing extinction." Up north, part of the Great Salt Lake dropped to its lowest level since record keeping began in 1847.



### PHOENIX, ARIZ.

William Calvin "Slim" Sterling stands near his tent on June 14. "It feels like God is holding a magnifying glass to your legs," said the 39-year-old, who suffered from heatstroke months ago, during what became Phoenix's hottest June on record. "I can feel the sun cooking my shoulder blades." For relief, he covers his head with a wet shirt, uses a battery-powered fan and stays as hydrated as possible. "It's a war zone," he says. At a nearby shelter with shade, "it's like peace."

### PORLAND, ORE.

Isaiah Vankova and Sofia Zambrano, both 18, stand on the bank of the Willamette River near Sellwood Riverfront Park on June 27. Record-shattering heat in Portland, where that day it was hotter than Dubai, led to canceled classes and shuttered restaurants and other businesses. The next day, calling the heat "too dangerous," the city's parks-and-recreation department closed outdoor pools after lifeguards suffered "heat-related illnesses."

### HARD ROCK CHAPTER, ARIZ.

Lorraine Herder, 68, stands on her recently planted cornfield in the Black Mesa region of Navajo Nation on June 24. When she was growing up, the family brought its livestock to nearby springs for water. With those sources long gone after decades of local coal operations and rising temperatures, "this area is all dried up," she says. Each day, her family leaves home to fill a 275-gal. vat—at 1¢ per gal. Last year they spent \$5,000 on supplemental feed for the animals.





## WHITE SALMON, **WASH.**

Shane Brown, 35, visits the grave of his mother Jollene Brown at Klickitat County Cemetery District No. 1 on July 24. As a heat dome settled over the Pacific Northwest in late June, Jollene's air conditioner wasn't working properly, so he bought her a "swamp cooler"—an affordable device that cools the air through the evaporation of water. On the night of June 27, she told Shane, the air was so hot in her apartment that the cooler needed to be constantly refilled because the water evaporated so quickly. Shane said he would get her a new AC. The next morning, she

wasn't picking up his calls. After arriving at her home, Shane found her "just sitting in her recliner with her head to the side, like she had just fallen asleep," he says. "Jolly," 67, was full of opinions but not judgmental, loved Dolly Parton and Patsy Cline and puffins, and was among at least 60 people in Portland (and hundreds in the region) who died from hyperthermia during the heat wave. Shane called 911 and ran to a neighbor until police arrived. Later, while waiting for the medical examiner, he sat in the room with his mother "just because I wanted to be near her," he says. "I didn't want to leave her alone in the hot room."

Culture

# HAVING *the* TALK

Podcaster Alexandra Cooper made her name with salacious stories. With her massive Spotify deal, she's pushing beyond that

By ELIANA DOCKTERMAN

ALEXANDRA COOPER HAS THE POWER TO FELL DOZENS OF relationships. Just 26 years old, Cooper is arguably the most successful woman in podcasting, drawing on her own experiences to dole out sex advice to millions of listeners on her weekly podcast, *Call Her Daddy*. "In one episode, I was jokingly like, 'If he does this, break up with him,'" she says. "Then I got hundreds of girls DMing me being like, 'O.K., I did it,' and I'm like, 'Wait, hold on, let's make sure that's the right choice for you specifically.'"

Cooper and I are sitting in the lounge of the Greenwich Hotel in New York City, and she leans in conspiratorially while keeping one wary but eager eye on a group of girls in the lobby who have either spotted her by happenstance or tracked her down based on clues from her frequent Instagram Stories. Though she's the youngest of three, Cooper exudes a big-sister energy that attracts young women—ages 18 to 26, according to her agent—and she cultivates these relationships: between recording sessions in her L.A. home, she's often direct-messaging one of her 2.2 million Instagram followers, who call themselves the Daddy Gang.

It's that sway with a coveted demographic that recently earned her a \$60 million, three-year deal with Spotify, according to *Variety*. A Spotify spokesperson said the streaming service does not confirm contract figures but indicated the deal was part of a strategy to recruit big names, including the Obamas, Prince Harry and Meghan Markle, Dax Shepard and Joe Rogan. Unlike those other podcasters, Cooper was a relative unknown when she started her show. "There's not a lot of people that have become big from a podcast that didn't already have platforms," she says. "I take great pride in that." The Interactive Advertising Bureau predicts that podcasting ad revenue will exceed \$1 billion this year, and Spotify has been expanding aggressively into this space. *Call Her Daddy* airs there exclusively as of July 21, and Cooper is developing future projects with the company.

Now, as she moves into this circle of podcasting elite, she's



Cooper signed a reported \$60 million deal with Spotify for exclusive rights to her podcast, *Call Her Daddy*



PHOTOGRAPHS BY CAROLINE TOMPKINS FOR TIME

# Culture

trying to figure out how to advance a show that has, by her admission, sold itself with sex. "There's so much more behind the brand than crazy sex jokes," she says. "I want to be the biggest podcaster in the world. I've got this great big deal now. I want to prove to the world that I am worth this."

**CALL HER DADDY** began in 2018 as a two-woman show with Cooper and her then roommates Sofia Franklyn swapping raunchy stories and offering judgment-free counsel. It shot from 12,000 downloads to 2 million in just the first two months. Then, last year, their partnership went up in flames during a contract renegotiation with Barstool Sports, the media company that previously hosted *Call Her Daddy*.

The details are murky. Both women believed they weren't being paid enough. Both believed that was at least in part because they were women. Cooper decided to helm *Call Her Daddy* alone, and Franklyn started her own show. Each woman has shared her perspective on her podcast. But both have said that certain men wanted cuts of what they had created. The dispute became so vitriolic that Cooper had to ask her fans to stop bullying Franklyn. "I still have things that are lingering from that, and it happened a year ago," Franklyn said in an interview on the YouTube channel *No Jumper*. Cooper became so distrustful of men in the business world that she says she wants to hire only women for her Spotify team.

It wasn't just the falling-out that upset Cooper but the coverage of the breakup. "We were having a 'catfight.' And I'm like, This is not a catfight. We're talking about a multimillion-dollar brand that is on the line," says Cooper. She posted a video on YouTube explaining the business behind the podcast. It went viral. "That YouTube video changed my life," she says. "Before, people were like, 'She's the blond girl who talks about sex.' When I put out the video, everyone was like, 'Wait, this girl's smart. She knows what she's talking about with IP and trademarks and conversion rates.'"

Anyone who believed she was all sex tales and mirror selfies had failed to recognize that she'd been preparing for this job her whole life. She grew up in Pennsylvania with a psychologist mom and a sports-TV producer dad, and spent much of her

childhood with a camera in her hand. Her love of media actually hampered her sex education. Her private school offered health class at the same time as a video-production class, and Cooper took the latter. "I never had a sex-ed class ever in my life," she says. She turned instead to reality shows like *Laguna Beach* to understand women's sex lives.

Cooper played Division I soccer at Boston University, where she was a film-and-television major. One day a professor pulled her aside. "He said, 'You're not going to be taken seriously in this industry because of the way you look. You're going to have to work a little bit harder,'" she says. "It was the first moment in my life where I was like, Should I dye my hair? Should I wear baggy clothes?" But when the same professor asked students to submit silent films anonymously for a competition, he unwittingly chose hers as the winner.

## 'THIS is not a CATFIGHT. We're TALKING about a MULTIMILLION-DOLLAR BRAND that is ON THE LINE.'

During her sophomore year, Cooper met a Red Sox player who was more than a decade older than she was. He had won the World Series and had what she describes as "f-ck you money." It was her first serious relationship. "I'm in his penthouse after my last class of the day before [soccer] practice, and all I knew was, 'I don't want to lose this,'" she said on the podcast.

That mindset served as the germ of the idea for *Call Her Daddy*. She was in a relationship with a drastic power imbalance and wanted to figure out how to be in control. "It was like he put me through training camp, and I came out not really alive," she has said. She would mimic the manipulation she experienced in future relationships, and describes a period when she was flying across the country to meet famous athletes in hotel rooms.

I ask if she feels any responsibility toward fans wishing to follow her trajectory, even though some of her romantic entanglements turned toxic. "Those hotel moments, or whatever, they all taught me something," she says. "And yes,

the caliber I was doing it, people maybe think of that as aspirational. But we all go through our sh-t. But you're going to be able to figure it out."

**DESPITE HER SHOW'S POPULARITY**, when Cooper's agent Oren Rosenbaum was shopping it around last year, it was sometimes hard to get her a meeting. "You write her off as a super salacious good-looking girl who talks about sex, and say, 'That's not my thing,' without spending one minute looking at the content," he says. "But when they would take the meeting, they would immediately realize Alex is incredibly savvy."

If society puts a woman like Cooper in a box, is she better off confounding assumptions or playing into them in order to succeed? The gender politics of *Call Her Daddy* is complicated. In a recent podcast, she talked about hiding her face from her

boyfriend because she had not penciled in her eyebrows. Implicit is that idea that women have to look a certain way for their partner. She says she would have done the same thing if she were in a room of women. "That's still an insecurity of mine. It really had nothing to do with men," she says—an idea that's debatable depending on who you think defines the standards of American beauty.

Browse her Instagram feed of bikini photos and it becomes difficult to disentangle whether they promote women's body confidence or capitalize on the male gaze. Then there's the fact that Cooper grew her following with Barstool Sports, which has a reputation for toxic masculinity. "People are always like, 'Why didn't you leave?' Where did you want me to go?" she says. "Instead of running from the problems, I stayed. I fought until I could say one of the biggest shows on Barstool was led by a woman." (Barstool did not respond to multiple requests for an interview. The company is still handling *Call Her Daddy*'s merchandising.)

Given that we engaged in a nationwide conversation about locker-room talk not long ago, I ask her if the locker-room talk she engages in gives men permission to do their own misogynist version of it. "I don't think we should stray away from something just because men have historically been the ones to own it," she says. "I want to own it and do it better." She calls



her approach “elevated,” but that’s not the first word that comes to mind when you hear the crass language she uses to describe her sexual encounters.

While she seems genuine in her desire to help women navigate power dynamics with men, she resists exploring why that power structure exists. She insists listeners don’t want her to talk politics. “I’m a comedy podcast,” she says. The one exception has been Black Lives Matter. Last year she used her show to point listeners to places to donate and films to watch. As a white woman of privilege, she says, she wants to educate herself on any topic before she speaks. “But will I eventually maybe take more of a stance? Maybe.”

**THE DEMOGRAPHICS** of *Call Her Daddy*'s fans have shifted over time: Cooper says the audience split was about 60-40 women-men in 2018. Now, she estimates, nearly 90% of listeners are women. When a 19-year-old woman approaches to request a selfie during our interview, I ask why she likes the podcast. “It just gets me excited for the big, wide world,” she says.

Memory Gamino, 25, and Kiyah Bryant, 27, roommates in Chicago, began listening after Cooper and Franklyn's conflict made news. Gamino says Cooper's “a

▲  
*Cooper says that she's been underestimated her whole life but her success "did not happen by mistake"*

great storyteller,” though they agree it’s hard to tell when she is joking. Bryant says Cooper’s influence is clear: “Whatever she says, a million people are going to hear it.”

To Spotify, her audience was her appeal. “They’re devoted in a way that’s hard to find,” says Dawn Ostroff, Spotify’s chief content officer. And Cooper hopes they’ll evolve with her. “I’m a different person than I was when I started the show,” she says. She’s been inviting celebrities like Miley Cyrus to talk about sexual fluidity and therapists to discuss mental health. “I’m almost trying to rewrite the past a little bit. Not fully. I stand by a lot of the things I said, but the journey over the next few years is cementing what I want the brand to be, which is female empowerment.”

I ask if there’s advice she regrets giving. “I used to be like, ‘High-waisted bikinis—guys, I just don’t think they’re cute,’” she says. “I regret saying that because for some women that’s what makes them feel comfortable.” Given that she once advised women to compensate for being

unattractive by having sex like a porn star, remorse over bikini critiques may seem trivial, but for her listeners, it wasn’t. “I got so many women DMing me, like, ‘Thank you so much. Now I’m going to buy it,’” she says. “It just gave me chills.”

Both Cooper and Spotify are vague about their plans, though Cooper says she’s toying with the idea of a sex-crimes show that will, somehow, strike a lighter tone. “I’m looking at the charts and am well aware people are obsessed with true crime right now,” she says. “So I want in.”

For now, she is bringing her podcasting persona a little closer to her reality. She’s not, for instance, pitching her voice up like she used to. “It wasn’t a character,” she says. “It was more just like an elevated version of myself.” True to form, she used the show to fret about leaving single life behind. “Of course it ran through my head, ‘Are people not going to love the narrative that I have a boyfriend?’” Now she’s committed to Mr. Sexy Zoom Man (yes, that’s how she refers to him) and trying to live her life authentically—which she hopes will make for better content. “Now I feel like I’m way more myself,” she says. “I can be like, ‘I didn’t have sex this week. Sorry.’”—With reporting by MARIAH ESPADA and NIK POPLI □

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TIME

# THE WORLD AT A CROSSROADS

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# Where West Meets East

**THE ‘ASIAN CENTURY’ HAS BEGUN, BUT IT HAS ITS SHORTCOMINGS TOO BY KLAUS SCHWAB**

IT HASN’T ALWAYS BEEN EASY TO discern from a Western vantage point, but the rise of China and Asia has been the most important economic development of the past four decades. In 1979, many Chinese people had an average income of less than a dollar a day. Today, Shenzhen, China’s tech capital, has a per capita GDP of almost \$30,000. The city is home to tech giants such as Huawei, Tencent and ZTE, and a “maker movement” of tech startups. And many other Chinese cities, including Hangzhou, Shanghai and Beijing’s Zhongguancun (home to TikTok creator ByteDance), made equally impressive progress.

When I visited the country for the first time in April 1979, it was still reeling from two centuries of turmoil. But China’s new leader, Deng Xiaoping, had already begun pursuing an experimental set of policies, borrowed from Singapore, called “Reform and Opening-Up.” In its early days, it consisted of creating “Special Economic Zones.” In cities such as Shenzhen and Fuzhou, foreign direct investment was welcomed, and many features of a market economy were introduced. The economic development it spurred was then used as a flying wheel to create further growth and learning down the road.

It turned out to be a runaway economic success. China’s growth soared, and by the early 2000s it

entered the World Trade Organization. Around the same time, it started to gain a technological edge in various manufacturing industries, including electronic hardware, appliances and textiles. And, little by little, it began exporting its own growth model to other emerging economies in the region. As a result, just as growth in the West slowed, it skyrocketed in Asia. By its own calculation, China has lifted 740 million of its own citizens out of poverty. It averaged double-digit growth for over three decades. And it helped many other emerging markets achieve higher growth rates too.

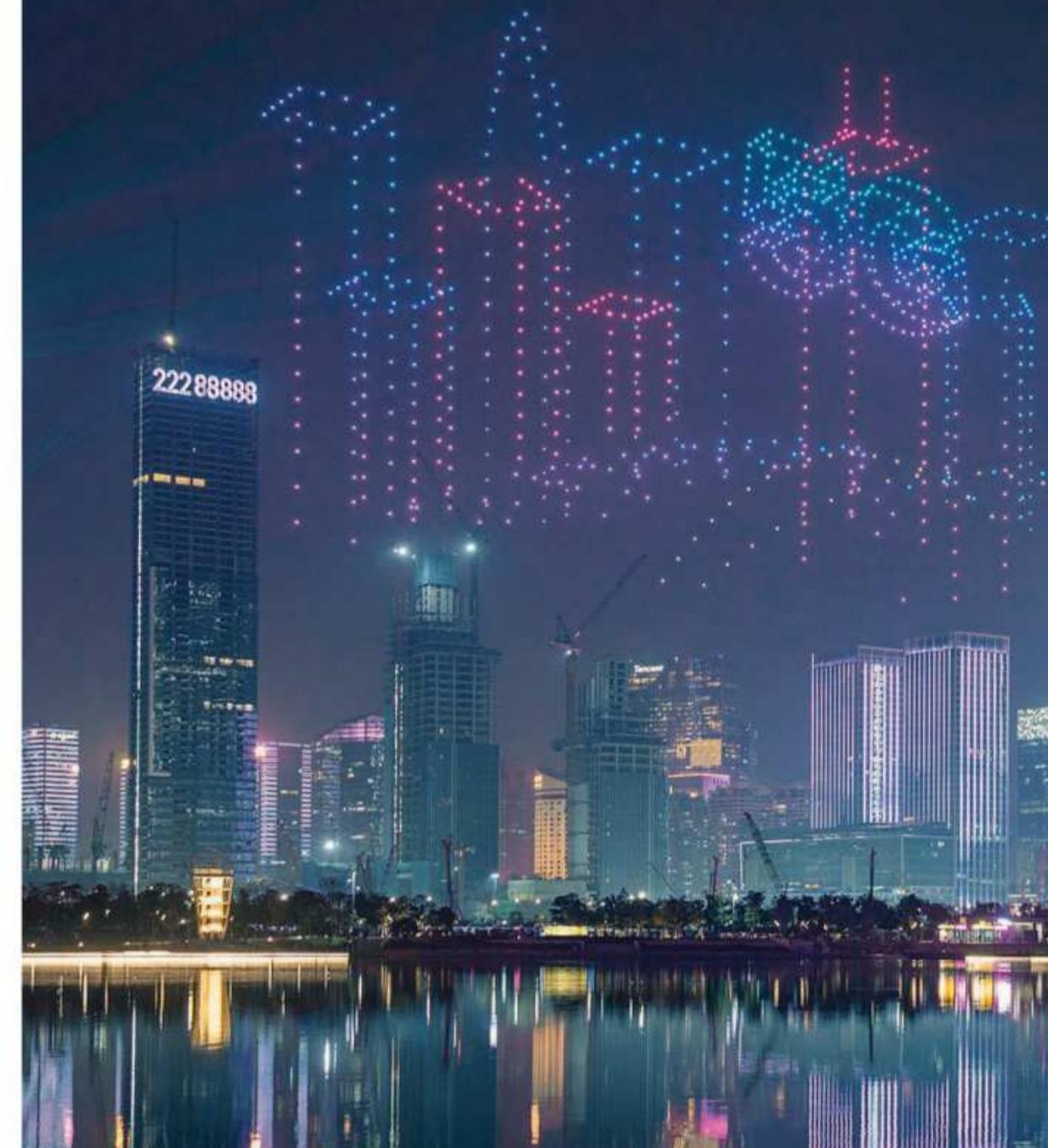
As a result, the “Asian Century” has already begun, according to some measures: 2020 was the first time in two centuries that Asian GDP, as a share of world GDP at purchasing-power parity, was higher than that of the rest of the world. The historical importance of this evolution cannot be underestimated. The last time Asia dominated the world economy was in the early 19th century, as the First Industrial Revolution got under way. Today, at the dawn of the Fourth Industrial Revolution, Asia is reconnecting with the dominant position it held for millennia.

**BUT HOW DID CHINA** achieve this success? The system that enabled it to leap ahead could be

summarized as “state capitalism.” It is undeniably capitalist, as the private sector produces more than 60% of GDP in China. But the system is also state-dominated, as the state retains its primacy over other stakeholders in at least three ways. It keeps a strong hand in the distribution of both resources and opportunities. It can intervene in virtually any industry. And it can direct the economy by means of large-scale infrastructure, research and development, and education, health care or housing projects.

This state capitalist system

**Neither shareholder nor state capitalism works for all people and the planet**





contrasts to the system of “shareholder capitalism” dominant in the U.S. and much of the Western world. In that system, the interests of shareholders dominate over all others. Companies operate with the purpose of returning the highest possible dividends to shareholders. And, the theory goes, the invisible hand of the market ensures the outcomes for society are optimal. In the 1980s and 1990s, shareholder primacy led to a long period of economic growth in the U.S. and turned it into the most prosperous nation on earth.

Both the economic systems championed by the U.S. and China have thus led to tremendous economic progress over the past few decades. But each has equally brought about major social, economic and environmental downsides. They led to rising inequalities

of income, wealth and opportunity; increased tensions between the haves and the have-nots; and, above all, a mass degradation of the environment. Those shortcomings in the West are well documented. But they are equally present in the Asia region.

Consider first the environmental crisis. Many cities in emerging markets are among those experiencing the worst effects of environmental degradation, pollution and climate change. Over 90% of the world’s population breathes air the World Health Organization deems unsafe, the organization said in 2016. But the 20 most polluted cities are all in Asia. China and India in the past few years were also responsible for the lion’s share of new coal and gas plants. In recent years, awareness about environmental concerns such as air pollution and CO<sub>2</sub> emissions has grown a lot in China. The country pledged to become CO<sub>2</sub> neutral by 2060. But it has a long way to go.

The issue of inequality is a major challenge for China and other Asian economies as well. China’s inequality almost continuously increased from the start of Deng Xiaoping’s reforms until around 2010. The policies it pursued, the World Inequality Lab wrote, caused “unprecedented rises in national income” but also “significant changes to the country’s distribution of income.” In the years since, the rate of inequality growth does seem to have slowed in China, but the resulting picture is still one of significant economic disparity.

**AS THE TWO** global superpowers race for economic and political superiority, the question can be raised which of their economic systems is the best recipe for building prosperous and stable societies. But it is a false dichotomy: neither shareholder nor state capitalism works for all people and the planet.

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**HUNDREDS OF DRONES FORM A LIGHT SHOW IN SHENZHEN, CHINA, IN DECEMBER 2020**

Wealth generation today requires a very innovative economy driven by entrepreneurial spirits. But modern societies do not tolerate excessive inequalities anymore. And using our natural capital has a delayed cost, as well as an increasingly intolerable impact on all those who suffer from climate change and pollution. This is why it is imperative to put social, environmental and good-governance objectives at the heart of society.

Doing so is possible under a third system: stakeholder capitalism, in which the interests of all stakeholders in the economy and society are taken on board, and the welfare of our people, and our planet and progress, are embedded in its genetic system.

Stakeholder capitalism would fit many Western societies well, given the damages done by focusing only on short-term profits, not long-term sustainability and equity. But it would benefit China and the emerging Asian economies too, given the shortcomings of state capitalism. It is time policymakers and business leaders around the world consider implementing it.

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*This text was adapted from Stakeholder Capitalism: A Global Economy that Works for Progress, People and Planet, by Klaus Schwab and Peter Vanham*

# big green jobs

THE JOBS  
OF THE  
FUTURE  
ARE GREEN.  
BUT WILL  
THEY BE  
GOOD?

BY JUSTIN WORLAND/  
LORDSTOWN,  
OHIO

PHOTOGRAPHS  
BY ROSS  
MANTLE  
FOR TIME

»  
LORDSTOWN  
MOTORS EMPLOYEES  
STAND AT THE  
COMPANY'S OHIO  
ASSEMBLY LINE





# W

WANDERING AROUND THE sprawling 6.2 million-sq.-ft. Lordstown Motors assembly plant in Ohio, it's tempting to imagine a green future that is full of jobs. The company's signature product is a high-performing electric pickup truck, and around the facility workers are buzzing about, getting ready to bring it into production.

In one corner, according to company officials giving TIME a rare tour, the firm will build its cutting-edge motors, which will be located in each wheel. A short golf-cart ride away, engineers explain how the company will assemble the lithium-ion battery packs that will power the trucks instead of diesel fuel. And while an army of robots sit idle, ready to be put to use assembling the vehicle, company officials insist they will soon be hiring rapidly. At full capacity, the company says, the facility will be able to churn out hundreds of thousands of trucks every year, a best-case scenario that would make Lordstown Motors a major player in the American auto industry and revitalize a part of the country that has been left behind by a series of big industrial departures.

But there's a reason one local official calls this part of Ohio the "land of broken promises." The Lordstown Motors jobs may be green, but it's an open question whether they will be good—and how many of them there will be. Unlike the 10,000-plus people

who used to make General Motors automobiles at this same building, Lordstown Motors employees do not belong to a union. Today, the plant employs only around 500 people, and it's unclear how many will ultimately work in the facility. For many locals, there's an air of uncertainty brought by recent headlines: Lordstown Motors is under federal investigation for allegedly misleading investors. The company's CEO and CFO both resigned in June.

The combination of its vaulting promise and tenuous future captures well the larger state of play in the world of green jobs. As the auto industry rapidly transforms—moving from the internal combustion engine that has defined road transportation for more than 100 years to electric vehicles—workers and manufacturing communities are waiting anxiously to see what the scramble to lower the nation's emissions will mean for them. On the one hand, building electric vehicles in communities like the Mahoning Valley, the region where Lordstown is located, promises to create the jobs of the future, resilient to the wave of imminent changes that will come as the post-pandemic economy rebuilds and modernizes. On the other, the picture of what an auto-manufacturing job in the new green economy looks like remains fuzzy.

The growth of electric-vehicle manufacturing in the U.S. could drive a renaissance for workers, creating new paths for unionization, training opportunities and

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**All of these decisions on electric vehicles ... need to be worker-centered.”**

—SENATOR SHERROD BROWN



better salaries. Or it could lead to lower wages, slashed benefits and a smaller workforce—and that's just for the jobs that remain in the U.S.

The stakes rose dramatically on Aug. 5, when President Biden gathered executives and labor officials on the South Lawn of the White House to announce new vehicle-efficiency standards and a goal of making 50% of new-car sales electric by 2030. "There's no turning back," said Biden, with U.S.-made electric trucks parked in the driveway behind him. "The question is whether we'll lead or fall behind in the race for the future. It's whether we'll build these vehicles and the batteries that got them to where they are here in the United States, or if we're going to have to rely on other countries for those batteries; whether or not the job to build these vehicles and



batteries are good-paying union jobs, jobs with benefits, jobs that are going to sustain continued growth of the middle class.”

Across the nation, auto companies, local officials and union leaders are trying to chart a path through this uncertain, fast-moving moment. Small towns and state governments are jockeying to capture their share of the emerging green economy, enticing electric automakers to invest in their backyards with tax incentives and worker-training programs. Legacy automakers are rethinking their businesses from the ground up, poised to spend tens of billions of dollars in the process, while union leaders are fighting to maintain a voice in the evolving industry. Meanwhile, the Biden Administration is trying to use the federal dime to shape the industry’s

transition in a way that will ultimately support communities.

The auto industry is not the only sector staring into the green unknown. Study after study shows that on a global scale, transitioning industry to a low-carbon economy will create new jobs, but those jobs won’t necessarily be in the same places, go to the same people, or offer the same pay and benefits. In the energy sector, for example, the International Labour Organization found that addressing climate change will create 24 million jobs globally while eliminating 6 million. This trend carries across large swaths of the economy.

But the science of climate change is urgent, and even the most wizened labor advocates acknowledge that such complexities cannot be an excuse for

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LORDSTOWN MOTORS EMPLOYEES GATHER AFTER WORK AT ROSS’ EATERY & PUB

inaction. Instead, they say, this moment must be viewed as an opportunity to create the best jobs as early as possible. “All of these decisions on electric vehicles and clean energy … will need to be worker-centered,” says Senator Sherrod Brown, an Ohio Democrat and longtime supporter of organized labor. “That will make all the difference.”

In eastern Ohio, residents are watching—hopeful, but not naive to the pitfalls and challenges ahead. They want Lordstown Motors to fulfill its promise of anchoring a new “Voltage Valley” that will bring thousands of jobs back to the area. Despite the uncertainty over the federal investigations the company faces, Lordstown Motors says things are on track. “At the end of the day, [community members] will see us producing a truck,” says Jane Ritson-Parsons, the company’s chief operating officer. And locals want to believe them. “We want what’s best for the valley economically, so we don’t want to see this project fail,” says Tim O’Hara, a GM assembly worker who served as the president of the local branch of the United Auto Workers (UAW) before moving to a GM plant in Kentucky. “We’re kind of in a wait-and-see situation about how this all turns out.”

**DRIVING THROUGH** the Mahoning Valley, a flat expanse between Cleveland and Pittsburgh with

530,000 residents, it's hard to miss the region's industrial roots—and the reverence for the workers who built it. The city of Youngstown, about 15 miles southeast of the Lordstown Motors plant, is home to the Youngstown Historical Center of Industry & Labor, celebrating the history of the Valley's steel industry. You can't drive across town without spotting a UAW bumper sticker. At Ross' Eatery and Pub, the local bar, union gear is displayed alongside Marines paraphernalia and hunting trophies.

GM was once at the center of this community. The more than 10,000 workers the company employed in the region at the assembly plant's peak supported thousands of other jobs. But changing consumer preferences and globalization destabilized everything, and the company's hold on the region loosened. In 2017, GM cut the first shift from the Lordstown plant, which at the time produced the Chevy Cruze; by the end of 2018 the company had told workers the entire facility would close. At Ross' Eatery, a poster hangs on the wall of the last car produced there, on March 6, 2019.

Mayor William "Doug" Franklin of Warren, a city a short drive from the plant, understands the personal impact of Mahoning Valley's booms and busts. His father worked in a local steel mill and his mother at a local auto supplier. Before becoming mayor, Franklin himself worked at GM for 25 years. He now describes himself as a "UAW retiree."

But Franklin doesn't want to talk about the Mahoning Valley's past. Instead of meeting at the historic mayor's office in Warren, he asked to meet a few blocks away at BRITE, a local nonprofit that supports energy-tech startups, which is trying to build an electric-vehicle ecosystem in the area. Franklin wants to see a full-scale rebranding of the region, making the Mahoning Valley a center for electric-vehicle manufacturing

**“We know how to take a punch and how to recover. That’s just in our DNA.”**

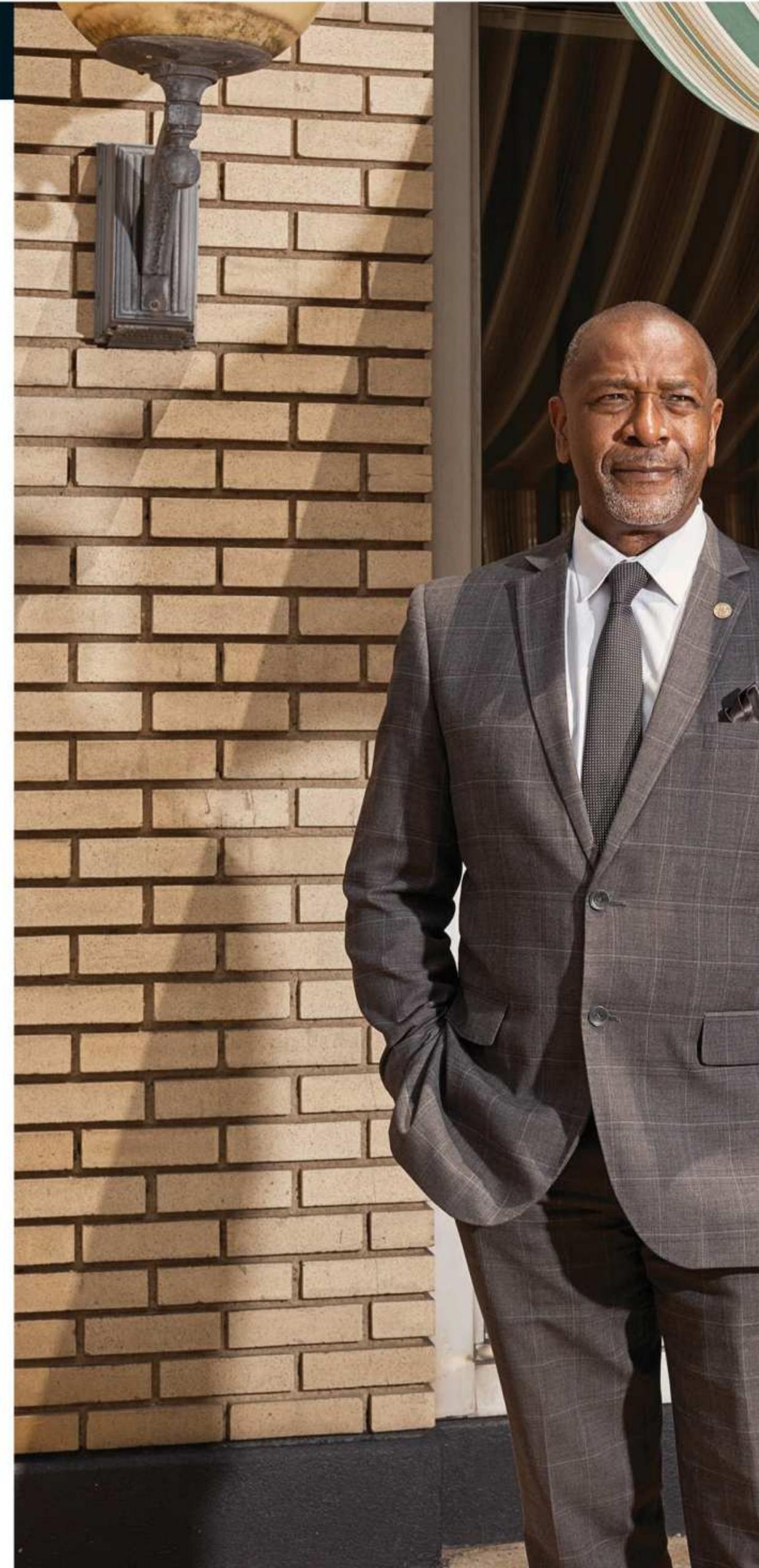
—WILLIAM “DOUG” FRANKLIN

that will bring job retraining, private investment and new technical jobs. "We know how to take a punch and how to recover; that's just in our DNA," he says. "This provides us a great opportunity to change our brand from the Steel Valley to the Voltage Valley."

The shift began in earnest in 2019, when Lordstown Motors formed a new firm to take over the GM facility and produce an electric truck. On Dec. 5, GM announced its own EV project just next door: a battery-cell-assembly plant called Ultium Cells, which is scheduled to open next year. With those two anchors, small startups have flocked to the region, working in everything from energy storage to solar power, eager to benefit from the electric-vehicle hub that seems to be taking shape. "There will be a couple thousand jobs that show up here in the next three to five years, based purely on the location," says Rick Stockburger, who runs BRITE.

More of these hubs could be on the way. Major automakers including GM, Ford and Stellantis are each spending tens of billions to prepare for an all-electric future. "This is transformational," says Gerald Johnson, GM's head of global manufacturing. "It's the biggest technological change this industry has seen in over 100 years. This is going from buggies to engines."

It has also given automakers an opportunity to think strategically



about where to invest—and there's no guarantee that they will do so in the same places they built the internal combustion engine. Companies are selecting sites based on a range of criteria, from geography and transportation access to the local workforce. And cities, towns and states are fighting to prove that they're the best suited to absorb those jobs. The rapid EV investment in eastern Ohio "isn't a surprise to us," says Jonathan Bridges, who heads



JobsOhio's efforts to recruit automotive companies to the state. "We've been actively working to position Ohio to be in that next generation of propulsion."

Communities with deep histories in the automotive industry may have some natural advantage in this race, such as hosting an old plant that can be refurbished. But there's no doubt that the change will also be disruptive. Making an electric vehicle is a less labor-intensive process than producing

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FRANKLIN,  
MAYOR OF  
WARREN, OHIO,  
WANTS THE  
REGION TO  
REBRAND

one of its gas-powered counterparts; many of the components under the hood of a car with an internal combustion engine simply aren't needed in an electric vehicle. Automakers estimate that they will require 30% less labor to produce an electric vehicle than a gas-powered one. Many companies in the supply chain that make parts for cars will cease to exist entirely.

That creates new problems for the workers who remain. With fewer auto jobs than job seekers, companies may try to pay industry workers less. That's difficult to do under current union contracts, but many auto companies have already begun to outsource work to subsidiaries and partners that are not unionized. While Ultium Cells, for example, says it won't stand in the way of a union, workers will need to organize to join one. In any event, pay is expected to be significantly less than what UAW workers earned at GM. Ford too has invested in a separate battery company, which may or may not be unionized one day. Some start-ups, like Lordstown Motors, are not unionized at all. And earlier this year a federal judge found that Tesla, now the biggest incumbent EV maker, had illegally sought to discourage union participation at the company. "A significant number of jobs are in jeopardy," says Marick Masters, a professor of management at Wayne State University. "And some of the jobs that are going to replace them may be nonunion, paying considerably less than the going rate."

There's also the skills challenge; many of the new jobs will likely require different technical capabilities than traditional auto-industry workers typically have. Software engineers, chemists and technical experts will be more in demand, while the engineers and technicians who spent their careers mastering components like the transmission will find their skills effectively irrelevant.

In Ohio, state and federal funds are already being put

toward re-skilling. The Excellence Training Center at Youngstown State University, for example, is a former juvenile-correctional facility that recently got a government-funded \$12 million makeover and began classes in July to provide locals with skills they will need to work at the new battery-cell-manufacturing plant. On the ground level, 3-D printers churned out YSU-themed tchotchkes to show off what they can do. In a vast second-floor space, more robots stood at the ready for the next trainee to take the wheel and learn how to operate them. "Higher ed is not meeting the needs of industry," says Jennifer Oddo, executive director of the training center. "But industry can't wait."

**COMPETITION FOR THIS** new generation of vehicle will be fierce, and some states are willing to spend big to incentivize. Around 500 miles southwest of the Mahoning Valley, in downtown Nashville, Bob Rolfe's office feels more C-suite than state-government administrator. From a corner perch on the 27th floor of a skyscraper, Rolfe, who runs Tennessee's Department of Economic & Community Development, surveys the city landscape as he works to bring new business here.

Tennessee is ahead of the curve in the American race to woo electric-vehicle investment: GM, Nissan and Volkswagen have all committed billions to build electric cars in the state, which already has auto-industry operations in 88 of its 95 counties. In the offices his department has set up overseas, from the United Kingdom to Japan, Rolfe's pitch to electric-vehicle makers has been simple: Tennessee is "pro-business." The state doesn't have a personal income tax, it funds workforce-development programs, and it has billions of dollars in tax incentives at the ready to offer companies.

Forty-five minutes down the road, GM's new, \$2 billion

Spring Hill EV-manufacturing plant is constructing the facilities to build its first electric Cadillac. New assembly floors rise from what was once empty land, part of an already sprawling GM complex that has been in operation since the 1980s. Next door, another new Ultium Cells plant is also breaking ground, and the state is working with GM to move a road to accommodate it. In total, Rolfe estimates the state is providing \$65 million in incentives to support GM's expansion here. "These are not inexpensive investments for the companies," says Rolfe. "They're not inexpensive for the state."

Local governments' aggressive maneuvers to attract the electric-vehicle business have unsettled a well-established dynamic among the typical auto-industry power players. The UAW, the longtime counterweight to the auto companies, has had to fight to maintain its influence. Its current contracts remain intact, but its leverage is limited as automakers rethink their business and local communities vie to host them.

The abrupt shift presents a conundrum to labor leaders. Climate change and global market trends mean electric vehicles are the future. The transportation sector in the U.S. emits nearly 30% of global greenhouse-gas emissions, and nearly 60% of that comes from light-duty vehicles. The U.S. may be slow to change this equation, but the rest of the world—and the car market—is moving full speed ahead. For the UAW to fight EVs would be futile, and it's in the union's interest to ensure electric vehicles are made in the U.S. Yet those same market trends mean union membership is likely to take a hit.

A representative for the UAW national union declined to comment on the record for this story, and threatened to block access to union officials if TIME contacted local members.

As it turns out, local union



THE SHELL OF  
A LORDSTOWN  
MOTORS  
PICKUP TRUCK  
SITS ON THE  
ASSEMBLY LINE

leaders and rank-and-file workers alike around the country said the transition to EVs has generated mixed feelings. In places like the Mahoning Valley, there is a cautious optimism that electric vehicles will bring prosperity, at least in the near term, even without organized labor. "They're high-quality, high-paying jobs," Franklin, the Warren mayor, says of the clean-energy ecosystem developing in his backyard. "Compared to what UAW members made in the past? We lost those jobs."

But in places that have yet to be chosen as a new EV hub, workers are skeptical, nervous, even terrified. In Facebook groups and after-hours chats, workers say, views of the country's EV future are falling along the same partisan lines as so many other aspects of American life. Many

conservatives doubt EVs even work, let alone represent an important part of the country's future. Democratic autoworkers accept the benefits of EVs, but worry that they might end up casualties of the industry's overhaul, no matter the rhetoric coming from Washington.

"Electric vehicles are the way of the future, it seems pretty obvious," says Justin Mayhugh, an autoworker at GM's Fairfax Assembly Plant in Kansas City, Kans., and a UAW member. "But I'd be lying if I didn't say that I think most of us here in Kansas City are pretty concerned about the lack of investment *here*."

**ON MAY 18, JOE BIDEN** traveled to Detroit to promote his infrastructure plan. Sitting in the driver's seat of a new electric



**30%**

AMERICA'S  
SHARE OF GLOBAL  
GREENHOUSE-GAS  
EMISSIONS

**2030**

YEAR BIDEN  
WANTS HALF  
OF U.S. CARS  
TO BE ELECTRIC

**30%**

DECLINE IN  
LABOR REQUIRED  
TO PRODUCE  
AN ELECTRIC  
VEHICLE WHEN  
COMPARED WITH  
ITS GAS-POWERED  
COUNTERPART

Ford F-150 truck wearing his signature aviator sunglasses, Biden told the gathered reporters, "This sucker's quick," before accelerating off into an empty parking lot. Shortly after, Biden conceded that the future of electric vehicles in this country is uncertain, warning that the U.S. is at risk of falling behind China. Then he quickly pivoted back to his mantra. "When I think of the climate

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**I'm a little more hopeful with Joe Biden ... but something's got to give.”**

—DAVE GREEN, GM ASSEMBLY WORKER

crisis," he said, "I think jobs."

This has been Biden's consistent talking point on climate change, from the campaign trail to the Oval Office. But the truth is that while the auto industry's transition may be inevitable, the myriad "good-paying union jobs with benefits" that Biden has promised will come with it remain a possibility, not a guarantee. And for better or worse, the federal government will play a key role determining whether that becomes a reality. "The United States is at a crossroads," says Trevor Higgins, senior director for domestic climate and energy at the Center for American Progress, a center-left think tank. "Where and how these electric vehicles will be built is going to be determined by federal policy choices."

The next few months may be decisive, as Congress decides the fate of Biden's massive infrastructure package. Both the big-ticket spending items, such as the \$174 billion Biden has proposed to stimulate electric-vehicle adoption, as well as the small print outlining the labor requirements for federal-funding beneficiaries, will shape the future of this new American industry—and workers' place in it. So far, much is left to be desired. A bipartisan infrastructure deal struck in the Senate contains some \$7.5 billion in funding for EV-charging stations; a big sum, to be sure, but far short of what Biden proposed. Biden has also sought to use his presidential authority and convening power to shape the EV future: his Aug. 5 announcement included tightened vehicle standards that would incentivize the transition, as well as voluntary commitments from carmakers to go electric.

That's the easy part. From there, the policy landscape gets more complicated, as Democrats try to infuse worker-friendly policies into other legislation that supports EVs. Democratic lawmakers have pushed legislation

to revamp electric-vehicle tax incentives so that cars would need to be assembled in the U.S. with union labor to qualify for a full tax rebate. Biden, widely viewed as the biggest union ally to occupy the White House in decades, has backed a measure that would make it easier for workers at fledgling EV companies—and businesses across the U.S.—to organize. "We have to get the President's full agenda passed, so that we can get the best outcomes in the transition to EVs," Liz Shuler, secretary-treasurer of the AFL-CIO, said at a July virtual event.

In the places that stand to gain and lose in these negotiations, people give the President's performance managing the industry's transformation mixed reviews. Many acknowledge that Biden's electric-vehicle agenda will help their local community. But there is also widespread understanding of what few in Washington want to admit: this transition is going to be messy. "When they say it's creating all these new jobs, that's a lie. I mean, you're just shifting jobs from here to there," says Dave Green, a GM assembly worker who previously led the local UAW branch in the Mahoning Valley. "'I'm a little more hopeful with Joe Biden and Democrats in office, but at the same time, something's got to give."

Whatever Biden tries, it's likely to run headlong into a wall of Republican opposition. Many in the GOP worry that supporting EVs will wreak havoc on the oil and gas industry, and cost millions of energy jobs in largely red states. It's true, of course, that transitioning to electric vehicles will have downstream effects for oil and gas workers, gas-station owners, and a long list of other established industries. But clinging to the past is worse for everyone. The climate is changing, and jobs will need to too. The sooner we admit it, the better we can prepare. —With reporting by LESLIE DICKSTEIN □

# China's AI Boom

**'THE WORLD'S FACTORY' IS INNOVATING, AND THAT WILL UPEND PRODUCTION EVERYWHERE**

BY KAI-FU LEE

FOR MANY YEARS NOW, CHINA has been the world's factory. Even in 2020, as other economies struggled with the effects of the pandemic, China's manufacturing output was \$3.854 trillion, up from the previous year, accounting for nearly a third of the global market.

But if you are still thinking of China's factories as sweatshops, it's probably time to change your perception. The Chinese economic recovery from its short-lived pandemic blip has been boosted by its world-beating adoption of artificial intelligence (AI). After overtaking the U.S. in 2014, China now has a significant lead over the rest of the world in AI patent applications. In academia, China recently surpassed the U.S. in the number of both AI research publications and journal citations. Commercial applications are flourishing: a new wave of automation and AI infusion is crashing across a swath of sectors, combining software, hardware and robotics.

As a society, we have experienced three distinct industrial revolutions: steam power, electricity and information technology. I believe AI is the engine fueling the fourth industrial revolution globally, digitizing and automating everywhere. China is at the forefront in manifesting this unprecedented change.

Chinese traditional industries are confronting rising labor costs thanks to a declining working

population and slowing population growth. The answer is AI, which reduces operational costs, enhances efficiency and productivity, and generates revenue growth.

For example, Guangzhou-based agricultural-technology company XAG, a Sinovation Ventures portfolio company, is sending drones, robots and sensors to rice, wheat and cotton fields, automating seeding, pesticide spraying, crop development and weather monitoring. XAG's R150 autonomous vehicle, which sprays crops, has recently been deployed in the U.K. to be used on apples, strawberries and blackberries.

Some companies are rolling out robots in new and unexpected sectors. MegaRobo, a Beijing-based life-science automation company also backed by Sinovation Ventures, designs AI and robots to perform repetitive and precise laboratory work in universities, pharmaceutical companies and more.

It's not just startups; established market leaders are also leaning into AI. EP Equipment, a manufacturer of lithium-powered

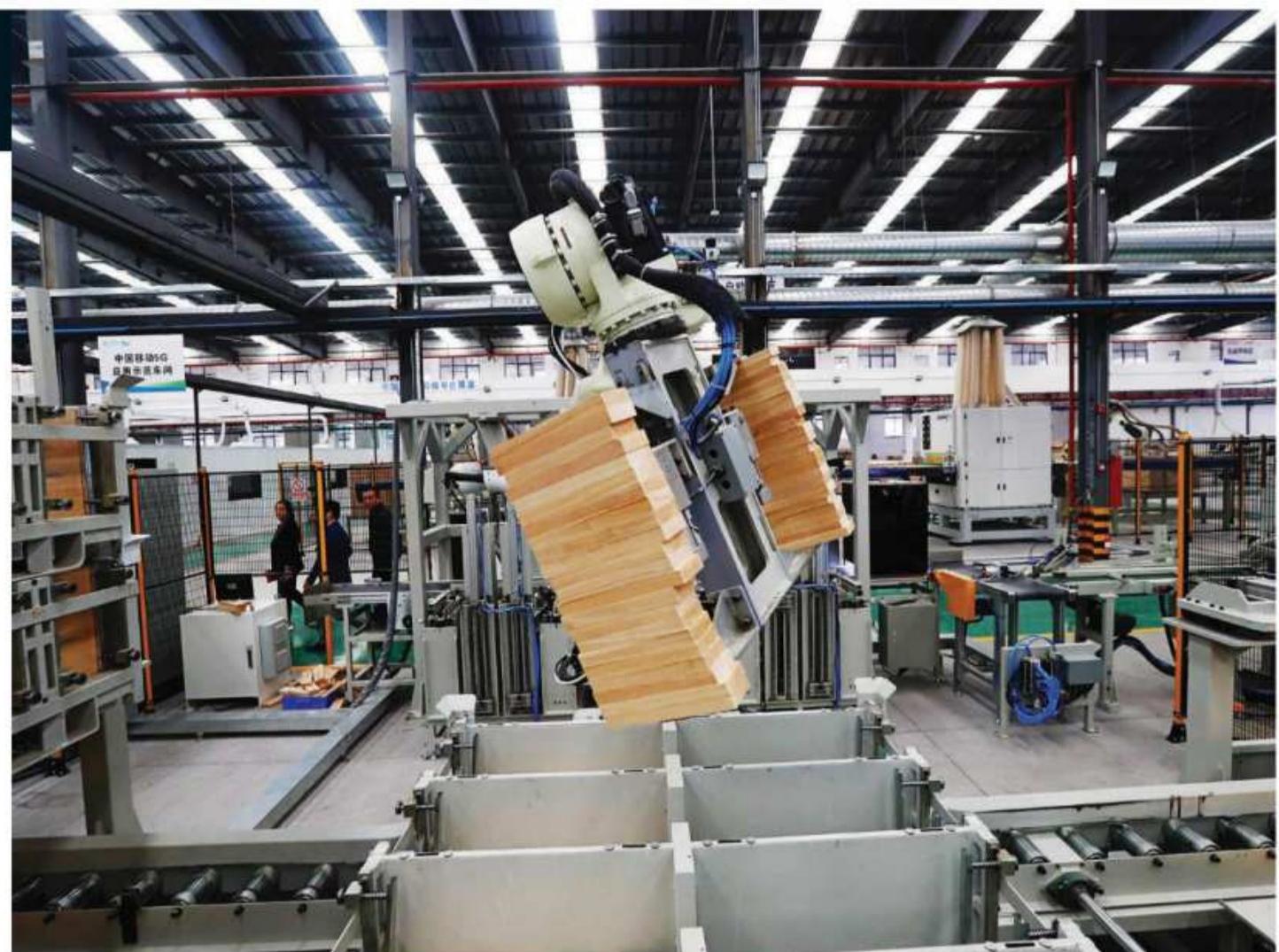
A ROBOTIC ARM MOVES BRICKS USING 5G AND AI ON OCT. 21 IN GANZHOU, JIANGXI PROVINCE

warehouse forklifts founded in Hangzhou 28 years ago, has with Sinovation Ventures' backing launched autonomous models that are able to maneuver themselves in factories and on warehouse floors. Additionally Yutong Group, a leading bus manufacturer with over 50 years' history, already has a driverless Mini Robobus on the streets of three cities.

**WHERE IS ALL** this headed? I can foresee a time when robots and AI will take over the manufacturing, design, delivery and even marketing of most goods—potentially reducing costs to a small increment over the cost of materials. Robots will become self-replicating, self-repairing and even partially self-designing. Houses and apartment buildings will be designed by AI and use prefabricated modules that robots put together like toy blocks. And just-in-time autonomous public transportation, from robo-buses to robo-scooters, will take us anywhere we want to go.

It will be years before these visions of the future enter the mainstream. But China is laying the groundwork right now, setting itself up to be a leader not only in how much it manufactures, but also in how intelligently it does it.

*Lee is the chairman and CEO of Sinovation Ventures. His next book, AI 2041: Ten Visions for Our Future, will be published on Sept. 14*



**AI is fueling the fourth industrial revolution, and China is at the forefront**



*I wish to train  
with astronauts*

Addison, 8  
Wilms tumor

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# How We're Going Back

LEADERS RETHINK THE RETURN TO WORK



**Anjali Sud**

CEO, VIMEO

The basic principles of white collar work are seeing a historic but inevitable shift.

Pre-pandemic, it was getting harder to keep employees engaged and productive. Workforces were becoming more distributed, but face time and business travel prevailed. Our attention spans were shrinking as we consumed more Netflix-like content at home, but forged on with boring presentations and lengthy emails at work. This was bound to impact productivity and bottom lines.

The pandemic forced us to adapt, working in new ways, transcending borders and time zones through videoconferencing, online broadcasts and messaging tools. We destigmatized working from home, bringing a new sense of humanity to work—

letting the messiness of our personal lives permeate a sanitized working world. Now we're stronger for it: leaders are learning to be more transparent and relatable, and colleagues are connecting in contexts they wouldn't have otherwise. Human connection is still the most powerful force in business, and we're finding ways to deliver it at an unprecedented scale.

How do we translate scaled human connection into tangible productivity? We redefine the idea of a "workplace" and a "meeting" with asynchronous, placeless communication, enabled by accessible software. And we embrace media like video to share information at work.

Technology has reached the point where mass adoption of video can extend

far beyond meetings and events—such that every time we send an email, collaborate on a project, host a training, demo a product or pitch a customer, that interaction is enhanced with engaging, professional-quality video that is transcribable and searchable, making it more accessible.

This allows us to unshackle complex, nuanced ideas from time-bound meetings, so knowledge can spread faster and be retained longer. We can ensure that, regardless of location or personal responsibilities, everyone has access to the same information. We can then build culture, promote collaboration and access talent in a truly global and inclusive way, breaking the limitations of "where" and "when" to greatly expand the "who" in our workforce.

As businesses plan for the future, it's time to adopt, not just adapt. Imagine how much more efficient and informed we will be when more than 1 billion knowledge workers become content creators, able to learn, collaborate and connect, without the constraints of time and place.



**Peter Salovey**

PRESIDENT,  
YALE UNIVERSITY

We have learned a great deal since transitioning to remote teaching, but one lesson stands out: using technology effectively benefits students while also helping universities build institutional resilience.

The fluid nature of the pandemic demonstrates just how rapidly we can transform. At Yale, faculty members quickly adapted to using digital resources to improve teaching, stimulate learning and create new educational models.

As we look forward to returning to classrooms in the fall, digital tools will help faculty members augment their classes by offering extra online office hours or discussion sessions—or by hosting guest speakers from around the world.

Faculty members are exploring new modalities for teaching as well. Recorded lectures will allow many to make the best use of class time with students and provide more learning resources. Remote teaching formats featuring transcripts and captions also increase accessibility of course content for all students. In some courses, traditional exam formats are being adapted or replaced

by assessments that provide ongoing feedback.

Our faculty and graduate students have used digital tools to establish new ways to work with undergraduates on groundbreaking research.

In the coming years, we will build on the insights gained during remote learning and the unbridled creativity of our faculty. Yale will continue to encourage new teaching formats such as blended course models and educational programs that allow students to take advantage of digital platforms for parts of the semester and still benefit from in-person lectures and interactions with peers on campus.

By force of a global emergency, Yale and many other universities around the world are pursuing our educational missions differently, but with conviction and ingenuity, we continue to teach the next generation of leaders. We have a responsibility to apply what we have learned to create a more resilient future. Although in-person teaching remains central to our educational experience, new technologies help us expand access and blend the best of the physical and virtual worlds.



## Ralph Hamers

**CEO, UBS**

Financial institutions have historically had a reputation for being slow or even resistant to change. But that simply wasn't an option in the past year, as restrictions forced every financial firm to transition to a drastically different way of working, which they

probably would never have done voluntarily. It was a necessary wake-up call for the industry.

At UBS, our business adapted rapidly and grew in tandem with change. A few things we hadn't expected happened: Internal surveys revealed that many employees were just as productive, if not more, while working from home; employees liked the flexibility of a hybrid model; and mindsets about digital were transformed as normal life was disrupted. Clients were demanding more seamless digital service, and because employees were facing similar needs in their own working environments, they started

thinking even more about how to improve the client experience.

For financial institutions with a large global footprint operating in a highly regulated environment, there will never be a one-size-fits-all approach. There also won't be a static one. To succeed, we need to operate with agility and care. Our firmwide analysis, taking into consideration factors like regulation, risk and productivity, found that two-thirds of employees can work from home highly effectively. We believe a hybrid approach will allow our people to have a better work-life balance, making us a more attractive employer, appealing

to a more diverse pool of applicants, such as working parents and those in continuing education. We also believe it will increase employee productivity and, as a result, improve the quality of our service to clients. Flexible working, by nature of its emphasis on technology and virtual collaboration, encourages an innovative mindset across our firm—which is a big part of our strategy.

The impact of in-person interactions, however, should not be underestimated and will remain an important component of our relationships, both internally and with our clients. They help build long-term

client relationships and trust. They support employee connectivity, positive team dynamics and agile working. But digital interactions offer different benefits—encouraging more innovative thinking, giving clients and employees more flexibility. We can give our clients a choice in how they interact with us. Hybrid working is the best of both worlds.

Organizations that proved their ability to adapt quickly and positively now have the space to set the tone for their industries going forward. And I for one am ready for the financial world to be just as innovative as the clients we represent.



## Steve Adler

**MAYOR, AUSTIN**

In our community, "Keep Austin Weird" is more than just a catchy slogan. It is the way people, policymakers and businesses of Austin think outside the box. This way of life has allowed Austin to become a beacon of innovation, a model for other cities, and a desirable location for companies to move to and grow, even amid a pandemic.

As cities across the world transition to the new normal, they need to find ways to support citizens and employers

to work in new ways.

For technology companies in particular, new workplace models have kept employees safe without sacrificing productivity, leading to a boom in the Austin tech sector. This boom is evidenced by Tesla choosing the Austin area for its new \$1.1 billion manufacturing facility and software giant Oracle relocating its corporate headquarters here.

During the pandemic, we have worked to help Austin businesses continue

growing and partnered with nonprofits like Workforce Solutions to offer pathways to financial stability to thousands of Austin residents.

Over the past 12 months, more than 11,000 new "remote work" employment opportunities opened in Austin, a significant spike from the 4,500 jobs posted in the previous year. Even into 2021, remote work has remained a crucial component for Austinites—including those seeking employment. We've

focused on supporting career training in Austin's most in-demand industries (information technology, health care, manufacturing and skilled trades) and a rapid job-training program emphasizing remote and hybrid workplaces.

Since the launch of the training program, RE:WorkNOW, Workforce Solutions has experienced a tenfold demand for remote workforce training and has enrolled more people in an activity in the first four months of

2021 than they typically would have in an entire year.

Today, Austin's unemployment rate of 4.4% is one of the lowest among major U.S. cities, well below the state average of 6.5%.

It helps that Austin is such a magical place to live, work and play. Fostering an environment recognized for its cultural, culinary and social scenes helps keep a city on the radars of employers and remote workers alike.

Connectivity is also crucial for city residents. Austin's \$7.1 billion transit system plan, Project Connect, will bring light rail and expanded transit connectivity. And placemaking in areas around stations will help highlight just what keeps Austin weird.

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**Cities ... need to find ways to support citizens and employers.”**



## Kentaro Okuda

**CEO, NOMURA**

The pandemic meant changes that would normally take years in Japan happened in just a few months. I believe this shift is here to stay for three reasons. First, to achieve sustainable growth in a rapidly shifting environment, it's critical to attract and retain diverse talent. Japanese people are becoming more accustomed to working from home, overcoming challenges and finding the right work-life balance.

We are aiming for a hybrid work style that combines time in the office and remote working. We have been encouraged by how well employees have adapted and succeeded when asked to work from home. Flexibility can help alleviate stress related to childcare and other personal matters, and it opens up options for hiring, enabling access to a wider, more diverse talent pool.

Second, the way we interact with financial clients is changing. Many Japanese people, particularly the older generation, value face-to-face contact when discussing their personal finances. We understand

these clients are not comfortable using apps and websites or even voice calls. Younger people are much more comfortable interacting online. For corporate clients, change occurs when we adapt to the ways they want to do business. If clients want to meet online, then you adapt accordingly. That then becomes the new normal.

Lastly, digital transformation will help us overcome some of the inconveniences of working online. Videoconferencing makes it easier to gauge reactions than voice calls. It won't be long before technological advances enable us to feel like we are in the same room. Increased connectivity should also help ease the loneliness and isolation that often affect those working from home. Educating employees about new technology is essential, and we have already launched a program to do so.

Interpersonal dynamics are also important. The connection from physically working alongside one another is hard to replicate in a digital environment, but we're exploring ways to do so.

Hybrid working gives people more freedom and control over their time—commuting time can be used more productively or meaningfully. That said, it's important not to apply a one-size-fits-all approach. Businesses must stay flexible and make incremental adjustments to find what works best.



## Jennifer Christie

**CHIEF HUMAN RESOURCES OFFICER, TWITTER**

Twitter's journey toward a more decentralized workforce began in late 2017, when we started exploring flexibility in work styles and locations to help us attract and retain the talent we needed to grow. By the time the pandemic hit, we were grateful to have several foundations in place that helped set our people up for success.

It wasn't without challenges, though. We

have worked to resolve the initial struggles with setting boundaries on our time and back-to-back meetings we found ourselves in, attempting to compensate for the lack of personal connection. Slack messaging and virtual events infused into our days some of the fun and silliness we had previously enjoyed in our offices.

Now, emerging from the pandemic, we find that 95% of our

employees surveyed say they want to either remain working from home full or part time. Previously, only 3% of our employees worked full time from home.

Our focus now is to build on this progress and go beyond choice and flexibility. We're obsessing about what the experience is like for all our people. We let employees choose their locations and work styles—working in an office, from home or a hybrid approach. We're redesigning our work spaces and people programs to be more inclusive and equitable. San Francisco is no longer the center of gravity that it used to be for Twitter—where the decisions were made, where the



## N. Chandrasekaran

**CHAIRMAN, TATA SONS**

As we think about the possibility of post-pandemic life, we must look at the positive changes we have the momentum to make.

I don't want to minimize the great distress that is still occurring globally and may continue for some time. But past pandemics have also brought forth fundamental change. The flu of the early 1900s killed around 6% of India's population. Yet it helped sow the seeds

for eventual independence and indirectly helped spur the country's transformation.

This crisis brought about a decade's worth of digital transformation almost overnight. This widespread comfort with digital tools will enable us to reduce commuting time and make it possible for workers to go to the office just a few days a week. We have found that few employees want to work from home all the time.

We see a hybrid model emerging that allows people to work in three places: at home, at the "office" and at some third place, perhaps a satellite office close to their home. The model will be structured to maximize the benefit of both virtual and in-person approaches. I once flew from Mumbai to California to give a 40-minute speech. Now travel like this may be seen as unnecessary.

One of the biggest benefits of this new way of working is that it opens jobs to more people and creates opportunities for more diverse hiring. It will be easier to hire women and people in rural areas—or even in other nations—who, either because of distance or

leaders were based and where one needed to be to advance their career. We aim to create a level playing field for all. We still see value in promoting certain in-person interactions, but need to keep increasing our ability to work effectively asynchronously and agnostic of time zone or location.

We are still figuring it out. We will learn a lot as offices continue to reopen and we observe how and where people are choosing to work.

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**We’re confident this is the future ... and there’s no turning back.”**

commitments at home, find it difficult to take full-time office jobs.

In India, much brainpower goes to waste because cultural and social structures make it difficult for women to take jobs. Nearly 120 million Indian women—more than double the population of South Korea—have at least a secondary education but do not participate in the workforce. More than a quarter of women with graduate medical degrees do not work. Overall, only 23% of all women who could work are employed. This is a tragic waste, and one of the many complex challenges to women’s labor participation is the lack of safe, reliable transportation

There is much we don’t know, but I do know this: we’re confident this is the future for Twitter, and there’s no turning back. We have forever left behind many of the practices and habits that were so deeply ingrained in how we used to work. That now seems like 100 years ago, not 18 months ago. Companies that don’t understand that, or think they can return to the way things “used to be,” will themselves be forever left behind.

to places of work.

We need female electricians, architects and engineers, because their participation in the Indian economy would contribute billions of dollars to our GDP. We are suffering from shortages of skilled labor while women who have these skills are unable to work. If we pursue work in a way that makes economic sense, productivity will rise and more people will enter the workforce.

Ideally, the future of work will combine the best of digital and in-person arrangements. It will take time. But if we adapt thoughtfully, we can benefit the environment, lower costs and, most important, respond to people’s needs.



**Darren Walker**

**PRESIDENT,  
FORD FOUNDATION**

As we work to end the pandemic and plan for the future, we have a generational chance to provide accessibility, safety and opportunity in workplaces around the world, and achieve fairness and dignity in the post-coronavirus economy.

We’ve known for years that work wasn’t working for most workers. Millions globally have endured unfair policies, unsafe conditions, intolerable mistreatment and inexcusably low wages.

And so, even as workers in the Global North look forward to rejoining colleagues in person—and all the serendipity such proximity sparks—organizations must reorient work to center workers and their experiences.

To me, this is deeply personal. Over the years, I’ve been privileged to sit at the board table and participate in decisions that affect countless lives. But in too many of these rooms, I’ve also felt the isolation of being the only person of color, Black person or gay person.

Many organizations have realized that approach won’t suffice. It’s not just unconscionable. It’s also bad for business. Together, we are gradually moving beyond tokenism, transforming how

organizations prioritize diversity, equity and inclusion at every level.

This momentum must extend beyond the boardroom. If employers listen to all workers and adopt policies that address their needs, we can help society move forward.

People with disabilities, for example, have long been denied the basic accommodations for remote work because many employers assumed it was unfeasible.

Now we know better. Forced to comply with public-health regulations, countless organizations went remote almost overnight, proving just how feasible equity can be. If we retain these essential accommodations, we can open the figurative office doors to more workers with disabilities than ever.

The same is true for other essential workers, whose indispensability grew even clearer in 2020. For example, the median hourly wage for care workers like home health aides and

childcare providers is just \$13. Paradoxically, many don’t receive sick days or paid leave, and cannot afford the very services they provide to others, leaving many dependent on public assistance. We can no longer deny them better wages, benefits and protections. We must prioritize these measures for all workers.

Finally, we must reimagine how people secure work in the first place. Many with criminal records face nearly insurmountable barriers to employment, from requirements to disclose conviction histories on applications to trade-license restrictions. This is a crisis of equity and opportunity, creating an environment where up to half of all Americans on parole or probation lost a job during the pandemic. Dismantling these barriers would bring more people into the workforce, ushering in a second chance at success.

From these communities and their experiences comes a consistent principle for any organization looking to become more equitable, inclusive or just: the most effective workplace policies ought to be informed by the people they impact—and by all the stakeholders we intend our organizations to serve.

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**Organizations must reorient work to center workers.”**



# INCONVERSATIONS

CELEBRATE YOUR **INNER REBEL**

WITH **KENGO SAKURADA**

Group CEO, Sompo Holdings, Inc.

DIGITAL EVANGELIST KENGO SAKURADA BELIEVES SOMPO'S REAL DATA PLATFORM CAN PROVIDE A FOUNDATION FOR SUSTAINABLE SOLUTIONS TO SOCIETY'S CHALLENGES



Kengo Sakurada believes business must be a force for change. The Group CEO of SOMPO Holdings, one of Japan's largest insurers, Sakurada recently published his first book *Bushido Capitalism: The code to redefine business for a sustainable future*. In its pages he proposes that the virtues and moral precepts of Bushido, the code of Japan's Samurai warriors, offer a pathway to a more responsible, socially conscious and ultimately sustainable brand of capitalism.

Before setting out to change capitalism, however, Sakurada set about changing his own company. The 65-year-old chief executive is determined to transform SOMPO from a traditional insurer into a theme park for security, health and wellbeing. Sakurada's theme park is a venue that delivers real and tangible solutions, innovations and improvements to the lives of its customers and to the broader society.

Creating real solutions requires real data, and SOMPO, from its insurance and nursing care businesses, possesses a treasure trove of that increasingly valuable raw commodity. The company has been developing its signature Real Data Platform, in which it partners with other advanced technology firms to analyze the information and create predictive models that Sakurada believes can be used to help prevent accidents, loss, illness and disease. By doing so, it will help to build the security, health and wellbeing that everyone seeks. In a continuing series of conversations with leaders who are building a better future, TIME Brand Editor Mark Barton sat down with Sakurada to explore the role of business in a sustainable future.

## INTERVIEW WITH KENGO SAKURADA

BY MARK BARTON

**Barton:** In your book Bushido Capitalism, there's an episode that occurred in Davos, at the World Economic Forum in 2019. You say you had an awakening when you met a certain young Swedish environmental activist. Why was meeting Greta Thunberg such a significant moment for you?

**Sakurada:** I have to tell you that I didn't know who she was at all. After the panel discussion among us, she made a very energetic speech. She said that all of you are knowingly sacrificing priceless treasures and the future of humankind just to make money. I felt ashamed that I had not known about her. That such a young girl could have such great energy to change the world was a real shock to me.

**Barton:** Also in your book, you write that in the corporate world the word "purpose" has taken on an unhelpful air of jargon. But, you do mention it a lot, so let's discuss SOMPO's purpose.

**Sakurada:** We really had to work to define the purpose of this company. And yet, our purpose is simple. We are not just an insurance company. We want to be a theme park for the security, health, and wellbeing of our customers, the people of the world. We want to allow people to live happily and healthily until their last day.

This philosophy is in line with Bushido, the moral principle of samurai, who knew any day could have been their last day. Bushido tells us how to live to achieve a beautiful death. Then I would like to highlight "Pin-Koro" in Japanese. Essentially, it means that if you do the right things to create a happy or beautiful life, you will be at peace when your time comes to pass. This will have a great impact on sustainability within society.



**Barton:** An insurer reframing itself as a theme park is something new. Why did you make the transformation to this theme park for security, health and wellbeing?

**Sakurada:** A traditional insurer, what we have been for 130 years, comes in at the last point, when people have experienced loss or damage. They don't want to be thinking about loss or illness every day or minute. What our customers want to think about is how to be happier, how to be healthier, how to be more secure.

In my definition, a theme park transforms abstract things, such as dreams or beautiful images, into reality. We are seeking to transform the abstract concepts of security, health and wellbeing into things that are tangible, something our customers can feel.



**"In SOMPO's theme park, we are seeking to transform the abstract concepts of health, well-being and security into things that are tangible, something our customers can feel."**

**Barton:** In your book you call yourself a digital evangelist. You love technology. That brings me to how SOMPO uses its real data. How do you turn it into a valuable resource?

**Sakurada:** We are an owner of great amounts of real data, information that originates in the real world, such as health or car accident data. This real data is completely different from the virtual data that you can collect from the internet. It is different in terms of quality, usage and sensitivity. By using that real data, we can, for instance, make the nursing care industry much more productive. On top of that, by employing great technology, such as that which our partner Palantir provides, we may be able to make our industry into something that doesn't just embrace those needing care, but also makes their lives more predictable.

**Barton:** Why are partnerships, such as your collaboration with Palantir Technologies, so important to providing solutions to build this sustainable future?

**Sakurada:** Diversity is a source of innovation. When I attended the World Economic Forum, I engaged with people from diverse fields and backgrounds, ranging from environmental activists to professional musicians. All of these people were able to stimulate my thoughts and imagination to an amazing degree.

Now, the same applies to our Real Data Platform. We have plenty of real data from accidents or the nursing care business or disease. But the data we have is something like crude oil. We need new technology to make our crude oil into something much more usable for the future and for people. So we need partners with the right technology to refine our data to bring the benefits to people around the world.

**Barton:** You say in your book that real data is going to be as valuable as gold and crude oil in the decades to come. Do you really believe that?

**Sakurada:** I do believe that. In that way we can make our lives more predictable. How long you can keep that healthy life, happy life by changing your daily life?

**Barton:** How important is the issue of trust, the issue of privacy; that you are able to ensure that you can keep this data private?



**Sakurada:** That is a critical point: for us to be successful with our Real Data Platform, trust should be there. Fortunately, we started as an insurance company, which requires trust from the customer. Trust has to be motivated by something beneficial to the data provider, meaning our customer. The benefit is in terms of security, or in terms of health, of wellbeing: something that makes them happier.

**Barton:** Can you elaborate on the Real Data Platform: why it's so important?

**Sakurada:** I would like to present two concrete examples on how we can approach social issues through our Real Data Platform. In Japan, the nursing care industry is one of the fastest growing industries. But, there is a huge gap in supply and demand of human resources. That gap is going to widen much more by 2040 so we need to attain productivity and quality. By using real data with great technologies, we can achieve these two objectives simultaneously. Additionally, we could come up with the model to predict customers' health status.

Second, we have plenty of data on natural disasters and insurance. For instance, in 2019, severe typhoons hit Japan successively. All of this can be analyzed with a model that predicts if this area is hit by this size of a hurricane in September at two o'clock in the morning, what damage can be expected. But unless we have real data and technology, it's not possible.

The reason we call it a platform is that we have plenty of data collected from different areas of business. The data collected from nursing care about dementia could be used for safe driving. And data from natural disasters could be used for predicting crop harvests. Otherwise, we just have a vertical business model. It can be transformed just by applying this technology.

**"You can't grow without a dream. I encourage having a big mouth. If you talk big, you will behave big. That is a behavioral trait of a person who can achieve big things."**

Japan is a forerunner in terms of aging. Many other countries will face similar issues so if we are successful, Japan will be the model for expertise that can be exported to the rest of the world.

**Barton:** In the context of sustainability, what we can learn from COVID-19

**Sakurada:** I think COVID-19 can give us a lesson in terms of the importance of a platform for a sustainable future. A platform is an ecosystem, and an ecosystem naturally should be diversified. We need

to have a platform where we can collaborate. Where we can exchange our knowledge, technology and data based on trust. We need to create a platform and we want to be the one.

**Barton:** How does SOMPO want to be perceived in 2030?

**Sakurada:** We want to be a company that cannot be defined with the current terminology. We want to be something new. We want to be a genuine theme park for the security, health and wellbeing of people. Without SOMPO, society cannot be sustainable – that is the status we want to achieve. I think we can do it if we stick to our purpose.

**Barton:** In your SOMPO Manifesto, which I encourage all our readers to take a look at, you write about thinking big and celebrating your inner rebel. Why is it so important to do that?

**Sakurada:** First of all, you can't grow without a dream. And maybe you can say if you express your dreams you have a big mouth. I encourage having a big mouth. If you talk big, eventually you tend to behave big. You will show that you can back up what you say and make it a reality.

**"Diversity is a source of innovation. We have plenty of real data. But the data we have is something like crude oil. We need partners with the right technology to refine our data."**

**Barton:** What would your advice be to the young Kengo Sakurada, the admittedly obstinate and rebellious young man searching for his path and purpose?

**Sakurada:** You need to have your own thoughts, your own focus, your own story that foretells the future of your life. So my advice to young people is you have to be able to think for yourself, and you have to have a big mouth. But make sure you have a range of wisdom learned from classics like Bushido.

\*This interview has been edited for length and clarity





# A New Tax Deal

**REFORM CAN COMBAT POPULISM AND STRENGTHEN DEMOCRACY BY MALCOLM TURNBULL**

EVERY YEAR, MULTINATIONAL corporations divert some \$1.38 trillion in profits away from the countries where they were made to places with much lower, or even zero, corporate tax rates. And while much of this is strictly legal, that doesn't make it right.

Lower tax rates can encourage innovation and investment. But the combination of complex laws and outdated global rules has meant that tax has become effectively optional for large multinationals and wealthy individuals with the money to invest in lawyers and accountants.

This has come at immense cost, and not just to national budgets. Most dangerously, it creates a sense of injustice and resentment that has stoked the right-wing populism that is shaking the foundations of liberal democracy.

Nothing fuels mistrust in government, or the belief that justice and the rule of law serve only to protect the rich and powerful, more potently than wealthy corporations and individuals not paying their fair share of tax.

COVID-19 has made the gap between haves and have-nots painfully clear. While millions have suffered financial hardship, others have supercharged their wealth. Amazon's profits, for instance, have soared more than 220% during the pandemic as locked-down consumers have shopped online.

So what can a liberal democracy do to turn the populist tide? Tax is one lever to rebuild social trust and the social contract between a state and its citizens. Our tax systems were designed not just to fund government services but to redistribute wealth and income, to mitigate inequality and to ensure a social-welfare safety net for all.

When I was Prime Minister of Australia, I introduced major

**Tax is one lever to rebuild social trust and the social contract**

reforms to the way we tax multinationals, including the so-called Google tax that imposed a 40% tax rate on any large multinationals shifting profits overseas.

**BUT THERE IS ONLY** so much one country can do. That is why I welcome the proposed two-pillar reforms from the Organisation for Economic Co-operation and Development (OECD.) The first pillar aims to ensure that large multinationals pay tax where they operate and earn profits. The second pillar seeks to introduce a global minimum corporate tax rate—currently pitched at 15%—putting a floor on competition over corporate income tax.

Currently, 130 countries and jurisdictions representing 90% of global GDP have joined the OECD's tax proposal. The devil is in the details; we must make sure the international rules don't just favor wealthier nations over lower-income ones. Transparency is crucial. Our biggest global businesses can track every dollar in every country in real time. Why can't our tax systems do the same?

If my experience with tax reform has taught me anything, it's this: the hardest taxes to avoid are the simplest. The more complex a tax system, the more opportunities there are for loopholes. And before too long, taxes become optional for those with clever lawyers and the resources to cover their fees.

We can debate whether tax rates should be higher or lower—but not whether taxes are optional. If everybody pays, then everybody can pay less.

And yes, combatting populism needs more than tax reform. But we need a fair and just tax system to help defuse the gnawing sense of irreversible inequality that is enabling so many illiberal leaders. The future of our liberal democracies depends on it.

*Turnbull was Prime Minister of Australia from 2015 to 2018*





# Cash-Free Society

CHINA PULLS AHEAD IN THE DIGITAL-CURRENCY RACE BY CHARLIE CAMPBELL

EVERY MORNING, MEI YI WAVES goodbye to his wife and 3-year-old son and sets off for his finance job in central Beijing, riding into town by public bike share. Like most urban Chinese, the 37-year-old has long abandoned cash and instead pays for his commute—and a lunchtime bite from a convenience store in his office building—with a flash of a QR code on his smartphone screen.

In recent weeks, however, Mei has jettisoned the Alipay mobile-payment app run by Ant Group, an affiliate of e-commerce behemoth Alibaba, for a digital wallet of renminbi (RMB), as China's currency is called. The wallet is issued as a pilot project by the People's Bank of China (PBOC), the country's central bank. "It's quite convenient to use, but there are no outstanding features to replace mainstream payment systems such as Alipay," shrugs Mei. "For individuals, at least, any advantages aren't that obvious."

Perhaps not. But that tweak in Mei's daily routine portends a seismic shift in how every person around the world will soon be handling money.

ILLUSTRATIONS  
BY HARRY  
CAMPBELL  
FOR TIME

Mei's digital wallet may lack the snazzy features of the popular payment apps, but in the end such apps are intermediaries, linked to users' bank accounts. The content of his new wallet is actual legal tender, directly issued to him without the need of any middleman, traditional bank account or paper money to back it up. (To be clear, a digital currency is not the same as a cryptocurrency. While the likes of bitcoin, ripple and ether are largely unregulated—at times vulnerable to hackers, and subject to wild volatility—a digital currency is issued by a government.)

**PHYSICAL MONEY ISN'T** going to completely vanish. Although just \$5 trillion of the \$431 trillion of wealth in the world today is in the form of cash in pockets, safes and bank vaults, no central bank is seriously advocating the complete abolition of bills and coins. What makes digital currencies truly revolutionary are the tremendous new functionalities they offer. It's the financial equivalent of the leap from postal service to email, or lending library to Internet.

Digital currencies will help

governments fight malfeasance, smooth the transfer of assets across borders, and enable central banks to deal directly with citizens—especially helpful in times of crisis. The widespread adoption of such currencies stands to slash the operating expenses of the global financial industry. These amount to over \$350 a year each for every human being on earth. Cross-border transaction fees today account for up to 8% of Hong Kong's GDP, for example—a huge chunk that could be eliminated in a flash.

The SWIFT (Society for Worldwide Interbank Financial Telecommunication) system, which currently governs cross-border transactions between banks, may become obsolete. Depending on regulations, governments could also have direct visibility of financial transactions instead of having to ask banks to provide data. And the world's 1.7 billion unbanked, including around 14 million U.S. adults, can be helped into the financial system. It's the biggest change in money since the end of the gold standard.

"You're going to see a massive

transformation of the international monetary system," says Michael Sung, founding co-director of the Fudan Fanhai Fintech Research Center at Fudan University in Shanghai. Given that the U.S. dollar's role as the world's currency may be greatly diminished, Sung also sees "a lot of big geopolitical and trade effects too."

A recent survey by the Bank for International Settlements—a Swiss-based institution that acts as a "central bank for central banks"—indicates that 86% of them are actively researching digital currencies. Some 60% of banks polled are in the testing phase, and although in the U.S., the Federal Reserve is still exploring the concept, European Central Bank President Christine Lagarde says she wants a digital euro by 2025.

According to some estimates, a fifth of the global population will be exposed to a central-bank digital currency within three years. By 2027, some \$24 trillion of assets around the world is expected to be in digital form.

China is not the first nation to launch a digital currency—the Bahamas sand dollar was introduced six months before the digital RMB. But it's perhaps unsurprising that China, the country that invented the banknote in the 7th century, is in the technological forefront.

Although Washington is in no rush to disrupt the traditional international financial system that it dominates, Beijing sees geopolitical gains in helping establish the new protocols. More than 20.8 million people are currently using a digital RMB wallet in China, the PBOC says, and they have made over 70.7 million transactions totaling 34.5 billion RMB (\$5.3 billion). The central bank plans to let foreigners use the digital currency in time for the Beijing Winter Olympics in February.

The impetus is coming firmly from the top. China should "actively participate in formulating international rules

on digital currency and digital tax to create new competitive advantages," President Xi Jinping wrote last year in *Qiushi*, the principal ideological journal of the Chinese Communist Party (CCP).

**ALTHOUGH CHINA MAY** be leading the race to roll out a digital currency, the starting pistol was fired in a U.S. boardroom.

In June 2019, Facebook announced it was planning to issue a digital currency—initially dubbed Libra, now called Diem—for its 2.3 billion users. That a private company, servicing almost a third of the global population, was poised to circumvent the existing international monetary system shocked central banks already reeling from the rise of cryptocurrencies. It posed serious questions for the banks' control over their own countries' money supply, interest rates, inflation and so on. Libra was "a bit of a wake-up call that this is coming fast," Federal Reserve Chair Jerome Powell told the House Financial Services Committee last year.

Beijing had been quietly researching the digital RMB since 2014, but the Facebook announcement injected new urgency. Four months later, Xi urged officials at the CCP's fourth plenum to "seize the opportunities" presented by the blockchain technologies that underpin digital currencies. Today, China is the world leader in terms of the enterprise adoption of blockchain, which may enable digital currencies as they develop.

Of course, Chinese commerce is already largely digitized, thanks to the private duopoly of WeChat and Alipay, which together com-



prise 96% of all mobile payments in the country. Try to pay for a taxi-cab in Shanghai or Shenzhen with physical notes, and prepare for dirty looks. But the sway these private firms hold over the domestic economy is a matter of intense discomfort for party officials, underscored by a crackdown that began late last year on Ant Group, which runs Alipay. Regulators scuttled its IPO, levied a record \$2.8 billion fine against parent Alibaba and ordered the firm to restructure.

Beijing is also paving the way for state-backed financial competitors. Businesses are free to refuse commercial payment systems—but because digital RMB is legal tender, they are legally obliged to accept it. This empowers China's big banks to issue their own digital wallets, hopefully creating a multipolar environment with greater competition, a richer set of services and ultimately greater resilience for the economy.

"There is an important role for the government to play because free-market forces sometimes go

## What makes digital currencies revolutionary are the functionalities



overboard,” CEO Piyush Gupta of the commercial bank DBS tells TIME. “To establish a level playing field ... policy is quite important.”

In this way, digitization complements other innovations already under way. For years, big banks had a lot of resources but also a reputation for lacking innovation, because it was too easy to make money the traditional way. They had data but no idea how to use it. The rise of online payment providers means they’re now forced to compete, aided by new regulations. In Europe, for example, new “open banking” rules force banks to share their data with third-party companies, which can use it to create new products and services.

Another benefit of digital currencies is financial inclusion. In times of crisis, they enable governments to send aid and stimulus payments directly to the smartphones of affected citizens, regardless of whether the recipients have a bank account.

The pandemic has spotlighted the inadequacies of the current

system. As of April 30, 2020, the U.S. government had sent paper coronavirus stimulus checks totaling nearly \$1.4 billion to some 1.1 million people who were deceased. Delays were also rife. Knowing the months of waiting many people would suffer before receiving their stimulus checks, in March 2020, Congress considered a proposal to issue every American entitled to financial relief a digital wallet (although it did not pass).

Digital currencies can also be tailored to specific purposes. For example, in the Chinese pilot program, money has an expiration date of a few weeks because authorities are hoping to drive consumption in an economy trying to recover from the pandemic. Cash can be customized for other purposes. If the government is trying to stimulate the hospitality industry in a certain area, for example, it can program money to be used for meals and drinks but not for, say, petrol or power tools. If a hurricane devastates a coastal town, the government can instantly send relief payments to those affected to be spent only on essential supplies.

At the start of the pandemic, around \$50 billion of taxpayer money was paid to bail out U.S. airlines and prevent huge layoffs. In reality, \$45 billion was spent on buying back stock to artificially prop up share prices and the linked bonuses of executives. Although legislation could have prevented such wanton misuse, digitalization would also enable authorities to microtarget where every cent of every stimulus payment went and what it achieved.

“It’s fundamentally transformative,” says Jason Ekberg, head of corporate and institutional banking practice at management consultancy Oliver Wyman.

Of course, there are drawbacks. Having so much financial information digitized does, by necessity, increase the potential for hacking and cybercrime. “There’s no question that it creates risk,” says Ekberg. “The question is how you

can contain and control the risk.”

Neha Narula, the director of the Digital Currency Initiative at MIT Media Lab, agrees. “When we move from analog to the digital realm, that opens up a new set of vulnerabilities that we have to be very careful about and prepare for,” she tells TIME.

Digital currencies could also empower the state to make it impossible to donate to a vocal NGO, for example, or to purchase alcohol on a weekday. That is a special concern in authoritarian systems like China’s, where the potential for social monitoring would be exponentially increased.

Critics have argued that the digital RMB will simply become an extension of the surveillance state. Linked to China’s social credit system, it could see citizens fined in a split second for behaviors deemed undesirable. Dissidents and activists could see their wallets emptied or taken offline. Countries and companies doing business with China could be required to use the digital RMB—giving Beijing an unprecedented storehouse of business data.

Still, those concerns may well be overplayed. In most jurisdictions, it is already impossible to open a bank account without strict ID checks, and large transactions trigger banking scrutiny to root out criminal activity. Digital-currency transactions are also theoretically less monitorable than commercial payment apps because they do not necessarily have to take place over an Internet connection. China intends to allow smaller transactions to take place via “near field communication,” in a not dissimilar fashion to exchanging a file via Bluetooth or AirDrop.

In a June speech, Mu Changchun, the director of PBOC's digital-currency research institute, said there would initially be four classes of digital wallets. The lowest, "anonymous" tier would be linked only to a phone number, with a balance limit of 10,000 RMB (\$1,562) and single-payment limit of 2,000 RMB (\$312). If you need more, Mu said, "you can upgrade your wallet, upload your valid ID and bank-account information."

In the U.S., the Fed at present sees no first-mover advantage in disrupting a system it controls. Today, over 60% of all foreign bank reserves, as well as nearly 40% of the world's debt, is denominated in U.S. dollars. When it comes to digital currencies, it is more important for the U.S. to "get it right than it is to be the first," Powell said in October.

Narula adds, "It is right to be cautious." However, given that there are so many pending decisions about exactly how a digital currency might be designed and rolled out, and how it might impact different sectors of the economy, she says, "the U.S. needs to accelerate its research."

The RMB isn't poised to usurp the greenback anytime soon. China currently restricts the movement of capital to prevent capital flight and currency fluctuations from undermining its export-reliant economy. Until it stops doing so, international use of the RMB will be limited. And as the U.S. remains the world's No. 1 economy, a huge proportion of money circulating will remain in dollars. Developing nations will also prefer to retain dollars over erratic domestic currencies.

Still, the dollar's dominance will not go unchallenged. The rise of digital alternatives may mean the end of the dollar as default currency for developed and wealthy nations. Why, for example, should Chinese loans to Central Asia and Africa be designated in dollars, as they are now?

# 60%

PERCENTAGE  
OF CENTRAL  
BANKS TESTING  
DIGITAL MONEY

# 70.7M

NUMBER OF  
TRANSACTIONS  
MADE WITH DIGITAL  
RMB IN CHINA  
SINCE LATE 2019

# 1.7B

NUMBER OF  
UNBANKED  
PEOPLE GLOBALLY

Digitalization promises to democratize international payments by allowing settlement between currencies without exchanging to the dollar first. In April, JPMorgan, DBS and Singapore's state-owned investment company Temasek announced the creation of a wholesale digital-currency clearinghouse. Several other proposals are in the works.

Many nations—especially those with testy relations with the U.S., like Russia and China—would also prefer to settle accounts directly via digital currencies. This is not least because the U.S. has increasingly weaponized the dollar for geopolitical gains; it has twice put pressure on the SWIFT banking network to block all transactions with Iran, for example. It is a key reason Beijing has been working hard to establish common global rules for digital currencies. China was the first to contribute digital-currency content to ISO 20022 protocols—a new global standard to cover data transferred between financial institutions, such as payment transactions, credit- and debit-card information, and securities trading and settlement information.

Reducing reliance on the U.S. dollar is an explicit goal of many nations developing digital currencies. In a 2019 speech, Mark Carney, governor of the Bank of England, argued that technology could solve the problems of dollar hegemony by allowing the rest of the world, especially developing countries, to win back control over monetary policy. "Any unipolar system is unsuited to a multipolar

world," he said. "We would do well to think through every opportunity, including those presented by new technologies, to create a more balanced and effective system."

**FAIRNESS ALSO APPLIES** to investments. One of the potentials of digital currencies is the acceleration of "tokenization," or the packaging of value into a form that is instantaneously exchangeable. Global real estate, for example, is worth an estimated \$280 trillion. But trading it is extremely difficult, requiring hefty fees, negotiations and red tape.

But what if you could express its value in a token that could just as easily represent a fractional share of a beach house in Thailand, a sapphire in Mumbai or a wine collection in Normandy? Fine art, for example, typically appreciates far more quickly than the stock market. But today it is an investment accessible only to those with a Sotheby's account and seven figures in the bank. Technology would make it possible to create a digital token that represents a van Gogh or a Picasso, and to sell slivers of art to, say, excited young investors from Manila to Minneapolis.

Cryptocurrencies are already awakening some people to such possibilities, but the universal adoption of digital currencies promises the friction-free exchange of value between investors and consumers of all classes. That, says Sung, "is really the promise of these new technologies in the world of digital finance." And China, naturally, is proud to be in the vanguard.

"Although the digital RMB is not very popular at the moment, I believe it will be the mainstream payment method in the future," says coffee merchant Duan Chu, 32, as she enjoys a burrito paid for with the digital currency in downtown Shanghai. "I want to support it as much as I can." —With reporting by LESLIE DICKSTEIN and ALEJANDRO DE LA GARZA □

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**You're going to see a massive transformation of the monetary system.”**

—MICHAEL SUNG, FUDAN UNIVERSITY

# Rein In The Robots

**WE NEED PROTECTIONS AGAINST THE UNCHECKED GROWTH OF ARTIFICIAL INTELLIGENCE BY KATE CRAWFORD**

ARTIFICIAL INTELLIGENCE IS now one of the most concentrated industries in the world. Dominated by a handful of tech giants and deployed at a planetary scale, AI already influences high-stakes social institutions in education, criminal justice, hiring and welfare. AI is remapping and intervening in the world, expanding wealth inequality and power asymmetries. But so far the sector has primarily escaped regulation, despite affecting the lives of billions of people, even when its products are unproven or potentially harmful.

The COVID-19 pandemic has accelerated this. Many AI companies are now pitching emotion recognition tools (ERTs) for monitoring remote workers and even schoolchildren. These systems map the “micro-expressions” in people’s faces from their video cameras. Then they predict internal emotional states drawn from a short list of supposedly universal categories: happiness, sadness, anger, disgust, surprise and fear.

This industry is predicted to be worth \$56 billion by 2024, and yet there is considerable scientific doubt that these systems are accurately detecting emotional states at all. A landmark 2019 review of the available research found no reliable correlation between facial expression and genuine emotion. “It is not possible to confidently infer happiness from a

smile, anger from a scowl, or sadness from a frown,” the review stated. Even so, AI companies have built upon this “universal emotion” theory as a means to do human analysis at scale. ERTs are now being used in job interviews, in classrooms, in airport security and in law enforcement.

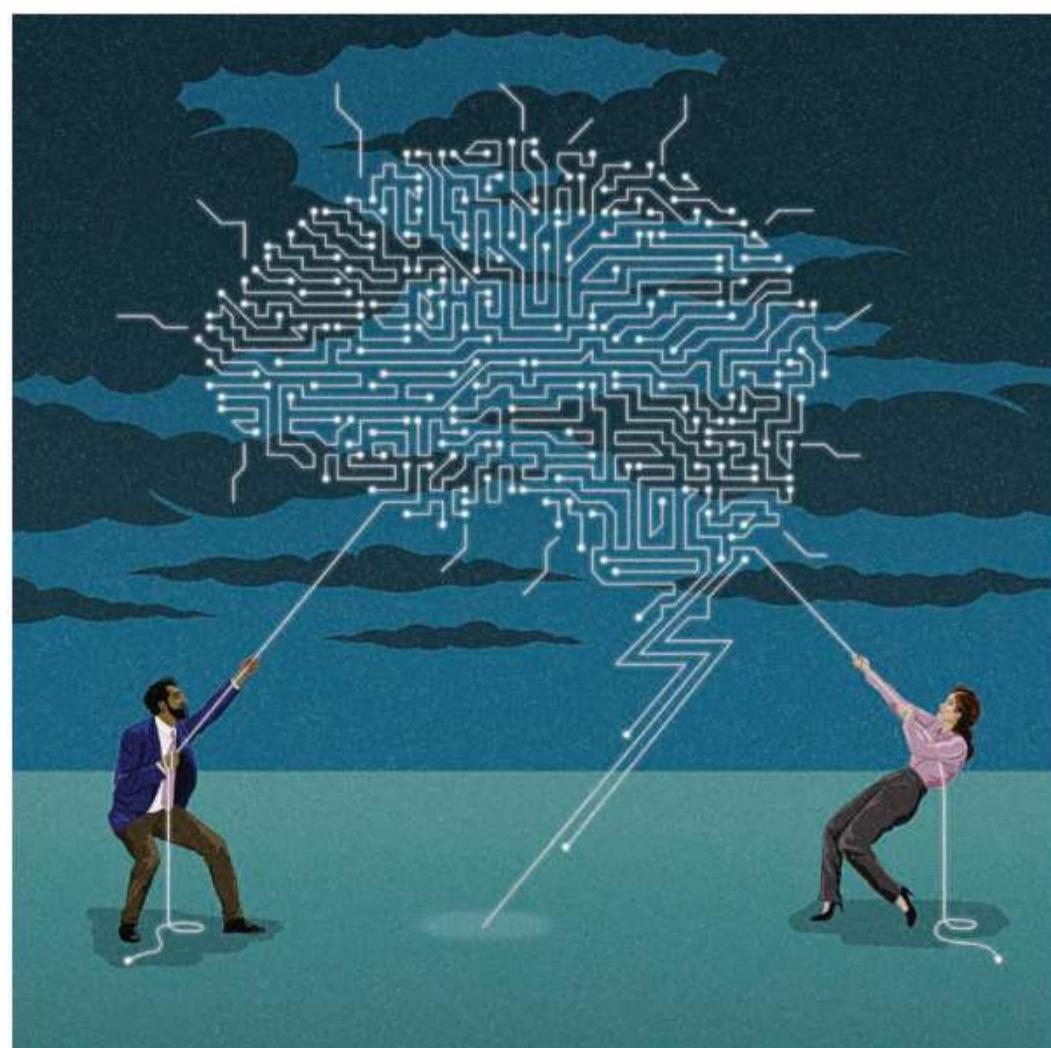
Resistance to this highly controversial technology is growing; the influential Brookings Institute released a publication in early August suggesting ERTs be banned completely from use by law enforcement, highlighting their lack of reliability and the dangers they pose to civil liberties. The European Union is the first to attempt an omnibus proposal to regulate AI. But the draft AI act has its pitfalls. It would, for example, ban most “real-time” biometric ID systems—but fails to define what, exactly, *real-time* means. A CCTV system that simultaneously runs facial-recognition software would be illegal, scholars have observed, but one that analyzes faces in footage after an event, like a political protest, would be fine.

**CLEARLY, WE NEED** far stronger protections that address the corrosive effects on society of this kind of technology. Too many policymakers fall into the trap of what University of Chicago academic Alex Campolo and I have labeled “enchanted determinism”: the belief that AI systems are both magical and superhuman—beyond what we can understand or regulate, yet deterministic enough to be relied upon to make predictions about life-changing decisions.

This effect drives a kind of techno-optimism that can directly endanger people’s lives. For example an ongoing review published in the *British Medical Journal* looked at 232 machine-learning algorithms for diagnosing and predicting outcomes for COVID-19 patients. It found that none of them were fit for clinical use. “I fear that they may have harmed patients,” said one of the authors of the study.

The growth of AI might seem inevitable, but it is being driven by a small, homogeneous group of very wealthy people based in a handful of cities without any real accountability. To contend with AI as a political, economic and cultural force, then, we urgently need stronger scientific safeguards and controls. Many countries around the world have robust regulations to enforce scientific rigor and thorough testing when developing medicines and vaccines. The same should be true for AI systems, especially those that are already having a direct impact on people’s lives.

## Techno-optimism can endanger people’s lives



*Crawford is senior principal researcher at Microsoft Research, a professor at USC Annenberg and author of Atlas of AI*



# Second Season

SADIQ KHAN'S PLAN TO MAKE LONDON GREENER AND FAIRER BY CIARA NUGENT

THERE'S A SPOT OF MUD ON Sadiq Khan's white shirt. The London mayor has arrived late after a tree-planting ceremony and he hasn't had time to clean it, he apologizes, as he strides into a cavernous meeting room at city hall. It's late June, but thick gray clouds hang low in the sky over Tower Bridge and the panoramic view of the city from the bulbous glass building's balcony. "The running joke is that I like to sit out on a deck chair and enjoy the weather," he says.

He doesn't have much time for that. Khan won a second term as mayor in May, just as the city began reopening in earnest after almost five months of lockdown. Like the rest of the world's large cities, London is reeling from the past 18 months, which have both exacted a heavier immediate toll on urban areas and thrown the chronic problems of big-city life into harsh relief.

With crowded housing and pockets of extreme deprivation alongside its more affluent neighborhoods, London has suffered

PHOTOGRAPH  
BY CIAN  
OBA-SMITH  
FOR TIME

the U.K.'s highest per capita death rate from COVID-19, with more than 15,000 lives lost. Black and Asian people, who make up at least 31.8% of Londoners, were up to four times as likely as white people to die from the virus nationwide. Those communities joined worldwide protests over racial injustice over the past year, forcing London to interrogate its policing policies as well as disparities in employment and housing. The number of Londoners in paid jobs fell by 5.5% from February to December 2020—by far the largest drop of any U.K. region, with low-income workers hit hardest. Meanwhile, wealthier residents have abandoned the city as remote working became the norm and lockdowns made cramped apartments unattractive. London's population is projected to fall by an estimated 300,000 this year, which would be the first decline in three decades. The exodus is exacerbated by the U.K.'s departure from the E.U. in January 2020, which has made it harder for Europeans to live and work in the city and undermined

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LONDON MAYOR  
SADIQ KHAN  
AT CITY HALL  
ON JULY 21



its status as a global financial hub.

To cap it all, in the summer of 2021, like cities in the U.S., China and Germany, London got a taste of an even greater forthcoming crisis, as unusually heavy rains twice cut power, closed transport links and inundated homes in parts of the city.

Londoners have backed Khan to get them through it. A former human-rights lawyer, raised by a Pakistani bus driver and a seamstress in housing projects in South London, Khan was first elected in May 2016 and widely celebrated as a symbol for the city's progressive values and demographic diversity. He burnished that image through a long-running feud with President Donald Trump, famously allowing activists to fly a giant balloon depicting the U.S. President as a baby over the U.K. Parliament building during his visit in 2018. Though his leftist Labour Party has trailed the ruling Conservatives by a double-digit margin for most of 2021, Khan ties with Manchester mayor Andy Burnham as the party's most popular active politician, according to pollster Yougov. In May's election (which was delayed by a year owing to the COVID-19 pandemic) Khan won the second greatest number of votes at a mayoral election of any candidate in the two-decade history of the office, after his own win in 2016. He is still daily hounded for selfies by young Londoners.

Sitting with a view over the city skyline, Khan is clearly feeling ebullient, despite the crises facing London. A lifelong boxing fan, he compares them to the 1974 "rumble in the jungle" between George Foreman and Muhammad Ali. "Foreman thought he had Ali for seven rounds. Then Ali used the ropes and came back and knocked Foreman out," he says.

He speaks at characteristic breakneck speed, reeling off a plan to use the COVID-19 recovery to build a "greener, fairer London": combining efforts to create jobs for struggling Londoners and improve deprived areas with

**\$17**

DAILY CHARGE  
FOR DRIVING AN  
OLDER, POLLUTING  
CAR INTO  
CENTRAL LONDON

**13**

NUMBER OF CITIES  
THAT HAVE  
JOINED LONDON'S  
PLEDGE TO DIVEST  
ITS PENSION  
FUNDS FROM  
FOSSIL FUELS

**44%**

FALL IN NITROGEN  
DIOXIDE LEVELS IN  
CENTRAL LONDON  
BETWEEN 2017  
AND 2020



the climate action needed to meet his 2030 net-zero emissions goal for the capital. "We know how to bounce back from things. So for anybody who thinks they've got us on the ropes, the history of London is Muhammad Ali, knocking people out."

**IT'S HARD NOT TO COMPARE** Khan with his immediate predecessor as London mayor: the U.K.'s now Prime Minister Boris Johnson. During his two terms, Johnson—educated at the elite boarding school Eton and Oxford

University—developed a reputation as a gaffe-prone and out-of-touch but undeniably charismatic celebrity mayor. He balanced his duties with writing a well-paid weekly newspaper column, poured nearly \$60 million of public money into a doomed project to build a "garden bridge over the Thames," and once got stuck on a zip wire over London during the 2012 Olympic Games.

Khan cuts a very different figure. In person, he's relaxed and friendly but lacks the flamboyance and comic bravado that allowed Johnson to get away with straying from his brief. Khan retains a lawyerly focus on evidence, firing off reams of facts to justify his policies, which so far have eschewed grand infrastructure projects. He is also a notoriously hard worker, says Ross Lydall, who has covered city hall for two decades for the London

“

**Let's have an arms race:  
Who can be the  
most green leader?"**



newspaper *Evening Standard*. “Boris didn’t really see it as a five-day-a-week job. Sadiq sees this as a seven-day-a-week job.”

Ed Miliband, a fellow Labour lawmaker who led the party from 2010 to 2015, describes Khan as “unflashy” and “incredibly principled.” He cites an episode in the wake of London’s deadly 2005 terrorist bombings when the Labour government attempted to pass a law to allow police to hold terrorist suspects for 90 days without charge. Khan resisted stiff party pressure and threats against his career to vote against it. “I think it does say something about Sadiq,” Miliband says. “There’s a sort of seriousness, a decency, a set of values in him which is really unusual.”

It could be argued that the job of London mayor is actually suited to an exuberant booster like Johnson rather than a cautious

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PEDESTRIANS  
AND CYCLISTS IN  
THEIR RESPECTIVE  
LANES ON LONDON  
BRIDGE IN MARCH

and quietly determined figure like Khan. The mayor has fairly limited powers, beyond acting as a spokesperson for London internationally, and negotiating on the capital’s behalf for prioritization from the central government. The office controls less than 7% of taxes raised in the city, compared with roughly 50% for its New York counterpart. The mayor has some influence over policing and control of some funds to build new housing, but their powers lie mostly in authority over London’s transport and road policy.

Within those strictures, Khan has channeled much of his energy into cleaning up London’s highly polluted air, through a bold crusade to reduce car traffic and improve vehicle standards. Air quality is a personal issue for Khan, who was diagnosed with adult-onset asthma while training for the London Marathon in 2014 and so has to use an inhaler “religiously twice a day.” But it’s also a matter of racial and social justice, he says. “Who do we think it is that has stunted lungs, or the cancer, or the heart disease, or the lung diseases? It’s poorer Londoners, least likely to own a car living in deprived communities. And you can see it in the life expectancy of Black, Asian and minority ethnic Londoners vs. others. Those gaps will narrow as a result of my policies.”

His flagship policy so far is an ultra-low-emissions zone (ULEZ) introduced in April 2019, which requires Londoners with more polluting cars—mostly petrol cars made before 2005 and diesel cars made before 2015—to pay a roughly \$17 charge when they

enter the city center. That’s on top of \$21 for the daily congestion charge, which was first introduced in 2003. The ULEZ has helped reduce the number of people living in areas with illegal levels of nitrogen dioxide by 94% since the start of his term, according to city hall.

Air quality has served as a kind of Trojan horse for Khan to push action on the climate crisis, says Mark Watts, director of the C40 coalition of 97 climate-leader cities. “Sadiq’s skill is that he’s really good at bringing the policies that are being implemented to deliver emission reductions closer to what most people’s everyday concerns are: their [health] and jobs,” Watts says. As the ULEZ pushed people to switch to newer hybrid vehicles or to abandon cars altogether, by the end of 2019 it had caused a 6% drop in central London’s road-related carbon emissions compared with a scenario without the strategy. The impact is expected to grow in the coming years, particularly after the zone expands in October to cover an area 18 times as large as its original size. “The ULEZ is, no question, one of the strongest climate policies in the world for transport in any city in the world,” Watts says.

Alongside the ULEZ, Khan expanded protected cycle lanes fivefold in his first term to cover 162 miles and bought hundreds of electric buses and dozens of hydrogen ones. From 2017 to 2021, he phased out all of the most polluting pure diesel-fuel buses in London’s 9,000 strong fleet, and by 2037, the goal is for all London buses to be zero emissions. Watts says Khan has also pioneered policies that have then been taken up by other cities, such as a scheme for city pension funds to divest from fossil fuels (joined by 13 other cities) and a plan to ban fossil cars from large parts of town by 2035 (joined by 35).

**NOT EVERYONE IN LONDON** has welcomed these policies. The planned expansion of the ULEZ

is proving controversial. John Moss, a local councillor in the northeastern district of Waltham Forest, part of which will fall in the new ULEZ zone, says the evidence produced by the mayor for the expansion shows little benefit for London's air quality by 2030 compared with that produced by the original zone.

He says the \$17 daily charge will be a brutal hit for those low-income workers like cleaners and nurses who live in outer regions of the city and rely on their cars to travel to shifts at hours when public transit is not always available. "There's a district nurse who lives [100 yards north of the ULEZ boundary] who has contacted me seven times saying, 'What can I do?' She's got a four-year lease on a car. What's she supposed to do with that?"

The mayor has offered \$78 million in small grants of a few thousand dollars to help Londoners pay to replace their vehicles, including pots specifically for low-income and disabled people and work vans. But high demand is expected to burn through those funds by the end of summer, with just \$17 million remaining at the end of June, according to the *Evening Standard*.

The mayor also faces criticism from environmental activists over a planned new road tunnel under the river Thames. Campaigners say the project will lock fossil-fuel infrastructure into the city, encouraging more people to drive and undermining the 2030 net-zero target.

Khan is pressing ahead, though. His office says that the tunnel is needed to reduce reliance on a Victorian-era tunnel that has proved vulnerable to flooding, and that modeling suggests it will not increase overall traffic numbers in the city because it will be tolled. "As a former lawyer, I base my policies in evidence plus my values," Khan says. "[Opposition] will happen along the way. And so you've got



to be ready for that, with the evidence to try and persuade people: that actually what we're doing we think is really important. It's what leadership is about."

Khan has also announced a series of funding pots designed to stimulate the sectors that need to grow as London decarbonizes—a \$14 million green new deal package for projects that create jobs in green tech, electric-vehicle infrastructure and solar-panel installation; \$5 million for projects that make it easier for social-housing providers to retrofit their buildings; \$156 million for public-sector buildings to improve their energy efficiency. He says his green recovery plan aims to avoid what he saw coming of age amid a period of mass unemployment in the 1980s. "Many of my mates were written off. If you lived in a poor area, didn't have skills, didn't have contacts, you couldn't get a job," he says. "My plan is to make London a global beacon of green investment and jobs, and train Londoners up to do them."

KHAN CANVASSES  
DOOR-TO-DOOR  
IN BARNET,  
NORTH LONDON,  
ON APRIL 30

Yet most of these funds are relatively modest, and will directly fund only a few thousand jobs. Khan claims they will encourage private investment, supporting more than 170,000 posts in retrofitting, electric charging and other fields. But without the full weight of the taxpayers' purse behind him, the success or failure of Khan's 2030 net-zero goal for London will depend greatly on the national government.

In recent months Johnson has, like Khan, been vying for recognition as a climate leader, using the U.K.'s hosting of COP26 in Glasgow in November as a platform and setting an ambitious target to reduce the U.K.'s greenhouse-gas emissions by 78% by 2035 compared with 1990

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**Many of my mates were written off.”**



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KHAN VISITS THE  
DWAYNAMICS BOXING  
CLUB IN BRIXTON,  
SOUTH LONDON,  
WHILE CAMPAIGNING  
ON APRIL 8

levels. Critics say his plan is light on details. Khan says he hopes the Prime Minister comes through with them, despite doubts about his predecessor's track record on the environment in London. "As far as I'm concerned, I'm the first green mayor London has ever had. But let's have an arms race: Who can be the most green leader?"

**IN MAY, KHAN VISITED** a bus factory in North Yorkshire. The factory, which has provided dozens of electric buses to London's transport agency, is an example, the mayor says, of how the capital's need for new infrastructure as it decarbonizes can drive industry in the rest of the country. He's made several such trips over his time in office, and also placed op-eds in regional newspapers. The aim, he says, is to "counter the animus, the us-vs.-them feeling" that many in the U.K. have toward the country's capital and financial hub, and an anti-London sentiment inside the national government, which is pouring billions of pounds into a plan to "level up" other regions to match the capital's financial power.

It could also be read as laying a foundation for national office. Khan has often ranked among the

**3**  
THE NUMBER OF  
MAYORS LONDON  
HAS HAD SINCE  
THE ROLE WAS  
INTRODUCED  
IN 2000

**7%**  
THE SHARE OF  
LONDON'S TAX  
REVENUE THAT THE  
MAYOR CONTROLS

favorites to be the next leader of the Labour Party. His 2016 victory was the first Labour win in a major election since 2005, leading some to see him as a ray of hope for a social democratic center-left that has foundered across the U.K. and Europe over the past decade, after dominating politics for much of the late 20th century. Just six of the E.U.'s 27 states—Portugal, Denmark, Sweden, Finland, Malta and Spain—have center-left governments. In France, the establishment Socialist Party was eclipsed by Emmanuel Macron's centrist movement in 2017 and has polled in the single digits ever since. In Germany, the Social Democratic Party has lost ground to the Greens and trails third behind them and the center-right in voting intention for the September elections for Chancellor.

In the U.K., Labour has struggled with an identity crisis after Brexit, which Labour opposed, and a tumultuous five years under far-left former leader Jeremy Corbyn. The party has suffered bruising defeats in the country's past four general elections, culminating in the 2019 loss of 59 seats, the second worst performance by any opposition for a century. In May the party

lost a special election for Parliament in Hartlepool, a seat in the north of England held by Labour since its creation, shaking confidence in new leader Keir Starmer, whom the party backed in 2020 to stem the damage.

Khan has repeatedly insisted he doesn't view the mayoral role as a stepping-stone. When asked if he would lead the Labour Party one day, he dodges the question: "I think the Labour Party is going through a difficult time nationally," he says. "I've got confidence in Keir as someone who is going to bring us back to being competitive. At the moment we're not competitive."

Khan says the route back to national power lies in taking seriously the root causes that have driven people away from the left. "Whether it's Trump, or the President of Brazil, or the President of Poland, their voters are actually decent people. But there's something about the lives they lead, where they think the progressive movement can't address their concerns. We can't write them off. We've got to actually listen to them, engage with them and provide leadership."

It's not a groundbreaking formula, and putting those insights into practice on a national level may take Labour years. But for now, with the wind in his sails in London, Khan is happy to revel in his ability to outlast one right-wing figure. He offers what could be a final salvo in his feud with the former U.S. President. "I think one of Trump's tweets in reference to me was 'stone cold loser,'" he says, raising his eyebrows. "Well, I won my election." □

# A Contract For Change

**MINOUCHE SHAFIK THE BRITISH-AMERICAN DIRECTOR OF THE LONDON SCHOOL OF ECONOMICS ON THE INVESTMENTS WE NEED**

Your book *What We Owe Each Other* calls for a new social contract among individuals, businesses and the state. What inspired you to write it? The wave of populism across the Western world made me ask myself, Why are people so angry and divided? The pandemic heightened all these problems. People are worried about inequality, and they're insecure and worried their children won't be as well-off as they are. The populists' diagnosis is right, but their answers are wrong. I kept thinking, I've got to come up with an agenda that will actually solve those real concerns.

Your book offers policy prescriptions, but you say it's not a blueprint, so what is it? It's moving away from a world of trickle-down economics to one where we water all the seeds. The social contract is about predistribution: investing early in everyone, especially those who are poor and deprived, and using that to grow a more productive economy.

**What kind of investments?** We have serious intergenerational equity issues. We need this next generation to be incredibly productive, but they're also going to have work lives of 50 or 60 years. Instead of educating them only into their 20s, let's maybe give people an endowment that they're able to draw down over

the course of their lives. It would empower people to invest in their own skills and become more employable.

**How do you propose giving young people a bigger voice to bridge the generational gap?**

The most practical thing is to have Internet voting. Governments might also appoint a person to consider the interests of future generations in making investment decisions. There are also more radical ideas, like weighting people's votes by how many years of life they have left.

**What is holding leaders back from bolder reforms?** One is this misperception that people vote with their pocketbooks. People's physical and mental health and the quality of relationships in their community are much more important drivers of how people vote than whether GDP has gone up or down.

**Your book is about national social contracts. Should this conversation also address what wealthier economies owe emerging ones?** Yes, but the reason we have this backlash against globalization and internationalism is because people feel like their national social contracts are not delivering.

**“The populists’ diagnosis is right, but their answers are wrong.”**

**Do you see opportunities for change emerging from the pandemic?** It will definitely change politics. People will expect more from their governments, and they will see how certain groups have suffered more than others, how it has exacerbated inequalities.

**You’ve called for a shift toward thinking more about the collective. Who is responsible for that?** It’s on all of us and those we elect. We need to think about what we owe each other at all levels of society, from how we divide up housework to how we share the burden of addressing the climate crisis. The process won’t be one of saying, “Here’s a new social contract, and everyone knows their place.” It will be a direction of travel.

**How do you have that conversation in a country like the U.S., where individualism and self-sufficiency are baked into the national character?** America is very divided. The question is, How do you persuade people that the way the U.S. economy is currently structured is not benefiting them? This is partly why I focus not on wealth redistribution but predistribution: giving everyone the same opportunity from birth and making sure everyone is able to earn a decent living, paid benefits and health insurance. If you could persuade people that this isn’t about welfarism but about opportunity, individualists might buy into that. —DAN STEWART

SHAFIK IN LONDON IN SEPTEMBER 2019





# The 100 Best Young-Adult Books of All Time

By Eliza Berman, Judy Berman, Madeleine Carlisle, Peter Allen Clark, Lucy Feldman, Annabel Guterman, Cady Lang, Shay Maunz and Megan McCluskey

ILLUSTRATIONS BY COLIN VERDI FOR TIME | PHOTOGRAPHS BY SHAWN MICHAEL JONES FOR TIME

Reporting by Leslie Dickstein and Nik Popli

# Building bricks

By Jason Reynolds

**T**HE FIRST TIME I EVER THOUGHT ABOUT WHAT my house was made of was when I learned it could be blown down. By wolves—big, bad wolves. Sure, “The Three Little Pigs” was supposedly a fairy tale about hard work. But for me, it was a warning about my own safety. And though I soon dismissed the fables read to me at bedtime as childish, that need to know I was safe never waned, especially as the wolves became real.

For others, the threat of the wolf may have shown itself in the malevolent magic of witches, or the stereotype machine, or the sense of inadequacy that comes with unrequited love. Are there bigger bogeymen than public embarrassment, stumbling through your first anything or causing unintentional offense? Each of us has a different threshold, a different perspective on what makes us feel unsafe. The cure for that feeling, any version of it, is found in realizing we are not alone. The function of story, especially for young people, is to bear witness to their lives, marking them as valuable and seen and part of something.

We experience this all the time in the stories we tell each other through casual conversation—*Your grandma does that too?!*—but the stories we read in books are ones we can experience over and over again. They serve as anchors, wings, compasses, road maps, magnifying glasses. They can make us feel safe by serving as a type of literal safe, where we can store our secrets with combinations and codes that feel tailored to us. In the same way we can live in them, books in turn can live in us, helping us become the dragon slayers and whistle-blowers and survivors we read about. We can become more of who we already are and feel safer within ourselves simply by meeting characters who call out to us by the names we call ourselves.

What must it feel like to be an inner-city Dominican-American girl struggling to be heard and then to find refuge in the story of Xiomara in *The Poet X*? Or to be a young man working to come to terms with his sexuality and to stumble upon the story of Aaron in *More Happy Than Not*? Or to be a Black teenager whose magic is constantly doubted and to crack the cover of *Children of Blood and Bone*? And how many times have we heard how Judy Blume’s *Are You There God? It’s Me, Margaret* confirmed the obvious yet overlooked—that girlhood, and all it entails, is nothing to be ashamed of? (Answer: millions.)

The books on this list, and the countless other greats that aren’t—the contemporary, the historical, the fantastic, the irreverent, the sweet, the political and everything in between—can be brick houses for young people, frantically patting what feels like the flimsy walls of their lives, to confirm their safety. Or better yet, when they really work, books can serve as bricks for young people to build themselves into the houses they’re searching for. Houses that can’t be blown down. Houses with enough rooms to entertain and board countless guests as they grow into safe havens for others.

1868

## Little Women

BY LOUISA MAY ALCOTT

So much about female adolescence has changed since the 19th century—yet *Little Women* endures, thanks to the timeless archetypes embodied by each of the sisters at its center, who face illness, grief and the agony of young love.

1908

## Anne of Green Gables

BY L.M. MONTGOMERY

This first installment of the eight-book Anne series—in which the headstrong heroine is sent to adoptive parents who’d wanted a boy—is a classic that captures in equal measure the joys and sorrows of growing up.

1943

## A Tree Grows in Brooklyn

BY BETTY SMITH

Smith’s semiautobiographical novel follows young Francie Nolan, the daughter of first-generation Americans, as she navigates the seemingly inescapable cycle of poverty that plagues her turn-of-the-century community.

1947

## Anne Frank: Diary of a Young Girl

BY ANNE FRANK

A book that shouldn’t exist, Anne Frank’s diary is also a miracle, a document that places the incalculable atrocity of the Holocaust in terms comprehensible to children even younger than Frank was when she wrote it.

1951

## The Catcher in the Rye

BY J.D. SALINGER

In the 70 years since expelled prep-school student Holden Caulfield first railed against the world’s superficiality, the character has grown into an

icon for generations of readers likewise wrestling with looming adulthood.

1954

## Lord of the Flies

BY WILLIAM GOLDING

Philosophers have long debated how human beings would behave in a so-called state of nature; Golding performed that thought experiment on a troop of preteen boys stuck on an island after a plane crash—a haunting vision of child turning against child that keeps gaining new resonance.

1960

## To Kill a Mockingbird

BY HARPER LEE

Lee’s classic 1930s-set novel about young Scout, her brother Jem and their lawyer father Atticus Finch traces the loss of Scout’s innocence as Atticus’ defense of Tom Robinson, a Black man falsely accused of raping a white woman, ends in injustice and tragedy.

1967

## From the Mixed-Up Files of Mrs. Basil E. Frankweiler

BY E.L. KONIGSBURG

When 12-year-old Claudia Kincaid decides to run away from home, she whisks her younger brother Jamie off to New York City to live in the Metropolitan Museum of Art. Their joyful adventure delivers unexpected twists and turns.

1968

## A Wizard of Earthsea

BY URSULA K. LE GUIN

In the magic-infused archipelago of Earthsea, the wrong mistake could unleash an ancient and terrible evil upon the world. That’s the lesson that a prideful young wizard must learn while training at the island of Roke’s school of wizardry in Le Guin’s debut installment in a beloved series.

## The Panelists

TIME recruited seven leading YA authors to help nominate top works and rate the contenders



Elizabeth Acevedo

National Book Award-winning author of *The Poet X*



ACEVEDO: MELISSA LYTTLE—REDUX; CALLENDER: ASHLEY CAIN; HAN: SLAVEN VLASIC—GETTY IMAGES; REYNOLDS: GARY GERSHOFF—GETTY IMAGES; SILVERA: ELLIOT KNIGHT; THOMAS: MARK SAGLIOCCHI—WIREIMAGE/GETTY IMAGES; YOON: AMY SUSSMAN—GETTY IMAGES

## 1969 I'll Get There. It Better Be Worth the Trip

**BY JOHN DONOVAN**

Lauded as one of the first teen novels to openly explore queerness, Donovan's tender book depicts the blossoming romance between lonely Davy, who's just moved to New York City, and his classmate Douglas.

## 1970 Are You There God? It's Me, Margaret

**BY JUDY BLUME**

Blume's classic novel follows Margaret, a sixth-grader who prays to God about her problems, including how she is anxious about not yet getting her period, as she strives to fit in. Her coming-of-age journey is uncomfortable, joyful and timeless.

## 1973 A Hero Ain't Nothin' but a Sandwich

**BY ALICE CHILDRESS**

Told from the distinct first-person perspectives of 13-year-old Benjie Johnson and a number of people in his life—including his mother, stepfather, drug dealer and best friend—Childress's acclaimed novel chronicles Benjie's descent into addiction and subsequent struggle to get his life back.

## 1975 Forever

**BY JUDY BLUME**

In a story that was ahead of its time, Blume traces the progression of Katherine and Michael's relationship as they develop feelings for each other and eventually have sex, framing a 17-year-old girl's internal debate

over when to lose her virginity as a personal choice rather than a moral dilemma.

## 1976 Tuck Everlasting

**BY NATALIE BABBITT**

The Tuck family have gained immortality after drinking from a powerful spring on young Winnie Foster's family land, and they strive to hide their secret from opportunists. As Winnie gets to know them, she learns formative lessons about her own mortality.

## 1978 Roll of Thunder, Hear My Cry

**BY MILDRED D. TAYLOR**

Taylor mined her family history to write this Depression-era novel about a Black family's battle to keep the 400 acres of prime farmland they own in rural Mississippi—a lauded

work of fiction that has helped generations understand the realities of Jim Crow.

## 1978 A Swiftly Tilting Planet

**BY MADELEINE L'ENGLE**

The third installment in L'Engle's beloved *Time* quintet sees A Wrinkle in Time protagonist Meg Murry's younger brother Charles Wallace fighting to save humanity from nuclear destruction at the hands of a dictator.

## 1978 The Westing Game

**BY ELLEN RASKIN**

Samuel W. Westing is found dead in bed with an envelope labeled, "If I am found dead in bed." Days later, 16 people are summoned to the reading of his will, where they learn that before his death, the eccentric millionaire devised a game in which they are all now players. The prize: his \$200 million estate. The test: to find out which of them killed him.

## 1981 Homecoming

**BY CYNTHIA VOIGT**

After their mother abandons them at a mall in Connecticut while on a family road trip, the four Tillerman siblings decide to finish the journey without her, setting their sights on finding a relative they've never met.

## 1984 The House on Mango Street

**BY SANDRA CISNEROS**

A modern classic that has survived several banning campaigns to become a classroom staple, Cisneros' book filters the story of a working-class Latinx neighborhood in Chicago through the perspective of 12-year-old Esperanza Cordero, a bright girl who quickly absorbs tough lessons about racism, inequality and growing up female.



### Kacen Callender

National Book Award-winning author of *King and the Dragonflies* and *Felix Ever After*



### Jenny Han

Best-selling author of the *To All the Boys I've Loved Before* series



### Jason Reynolds

Author and National Ambassador for Young People's Literature



### Adam Silvera

Best-selling author of *More Happy Than Not* and *They Both Die at the End*



### Angie Thomas

Best-selling author of *The Hate U Give*, *On the Come Up* and *Concrete Rose*



### Nicola Yoon

Best-selling author of *Everything, Everything* and *The Sun Is Also a Star*

1989

**Weetzie Bat****BY FRANCESCA LIA BLOCK**

In a wisp of a novel that plays like a pop banger, Block trails teenage bohemian Weetzie and her best friend, Dirk, through the burrito stands, punk venues and Old Hollywood ruins of '80s Los Angeles, channeling the spirit of youth into poetic language and a magic-sprinkled plot.

1993

**The Giver****BY LOIS LOWRY**

Twelve-year-old Jonas lives in a world without conflict, hatred or pain. But when Jonas begins his job as the Receiver of Memory, he learns all that's lacking in his world—such as love and even color—and begins to question the supposed tranquility of his society.

1997

**Ella Enchanted****BY GAIL CARSON LEVINE**

After being cursed as a baby with the "gift" of obedience, which results in her literal inability to refuse commands, Ella challenges her fate and embarks on a quest to advocate for herself—only to find that selflessness, and self-worth, can be more powerful than magic.

1998

**Holes****BY LOUIS SACHAR**

Not everything is as it seems at Camp Green Lake, a juvenile detention center where teen boys "build character" by digging a new hole 5 ft. deep and 5 ft. wide every day. Fourteen-year-old Stanley Yelnats, convicted of a crime he didn't commit, is determined to unearth the truth about what he and the others are really digging for.

1998

**If You Come Softly****BY JACQUELINE WOODSON**

Jeremiah, a gifted Black boy from Brooklyn, feels painfully out of place as a new student at a posh Manhattan prep school. That is, until he finds love at first sight with a white Jewish classmate named Ellie. Woodson infuses their romance with the emotional urgency and sense of social justice that defines her celebrated work.

1999

**Angus, Thongs and Full-Frontal Snogging****BY LOUISE RENNISON**

This teen cult classic is written as a collection of intimate no-holds-barred journal entries from 14-year-old Georgia, who describes, in her own irreverent and delightful way, all the challenges of navigating school and surviving unrequited love.

1999

**Monster****BY WALTER DEAN MYERS**

Tracing the horrific circumstances that brought 16-year-old Steve to trial for murder, *Monster*, like many of Myers' best narratives, grapples with the difficulties of growing up Black in America and asks young readers to consider the realities of racism.

1999

**Speak****BY LAURIE HALSE ANDERSON**

At a big party over the summer, Melinda was raped by a rising senior. She called the police, getting everyone in trouble, but none of her peers know what happened to her—a tension she describes in gutting first-person narration in Anderson's classic novel.

2000

**The Princess Diaries****BY MEG CABOT**

When Mia's estranged father reveals she's the heir to the throne of a tiny country, she's more than a little overwhelmed. In a series of journal entries that are simultaneously hilarious and heartfelt, Mia navigates adolescence and begins to figure out her views on public service and the importance of friendship.

2000

**Stargirl****BY JERRY SPINELLI**

Leo is a junior at run-of-the-mill Arizona high school Mica High when he meets his formerly homeschooled classmate Susan "Stargirl" Caraway—an eccentric new student who upends Mica's social hierarchy simply by being her authentic self.

2001

**Rainbow Boys****BY ALEX SANCHEZ**

Sánchez's influential novel follows high school students Jason, Kyle

and Nelson as they come to terms with their sexuality and begin to face adulthood. The teens, each at different stages of coming out, contend with first loves, sex, friendship, intolerance and the lingering threat of the AIDS epidemic.

2001

**The Sisterhood of the Traveling Pants****BY ANN BRASHARES**

Friends since birth, Lena, Tibby, Bridget and Carmen discover a unique way to stay connected while life takes them in new directions during a summer apart: sharing a pair of secondhand jeans that miraculously fits them all.

2001

**A Step From Heaven****BY AN NA**

Through Young Ju's perspective as a young daughter who moves from Korea to California, Na depicts a family's struggle to make their new life work as they encounter financial burdens, substance abuse and cultural hurdles.

2002

**Before We Were Free****BY JULIA ALVAREZ**

Anita is 12 years old and living under the bloody reign of Rafael Trujillo in the Dominican Republic when she discovers her family is part of a dangerous underground resistance.

2002

**Feed****BY M.T. ANDERSON**

In Anderson's dystopia, most of the world has received brain implants, called "the feed," to access a broad type of Internet. Brooding and all too prescient, *Feed* is both a cautionary tale of a tech-reliant future and an admonishment of modern consumer life.

2003

**Persepolis: The Story of a Childhood****BY MARJANE SATRAPI**

Satrapi grew up during a period of great upheaval in 1970s Tehran. The brilliance of her graphic memoir is in her refusal to simplify the complex, painful history of 20th century Iran for a young readership. Instead, she leans into the confusion she felt as a child.



2004

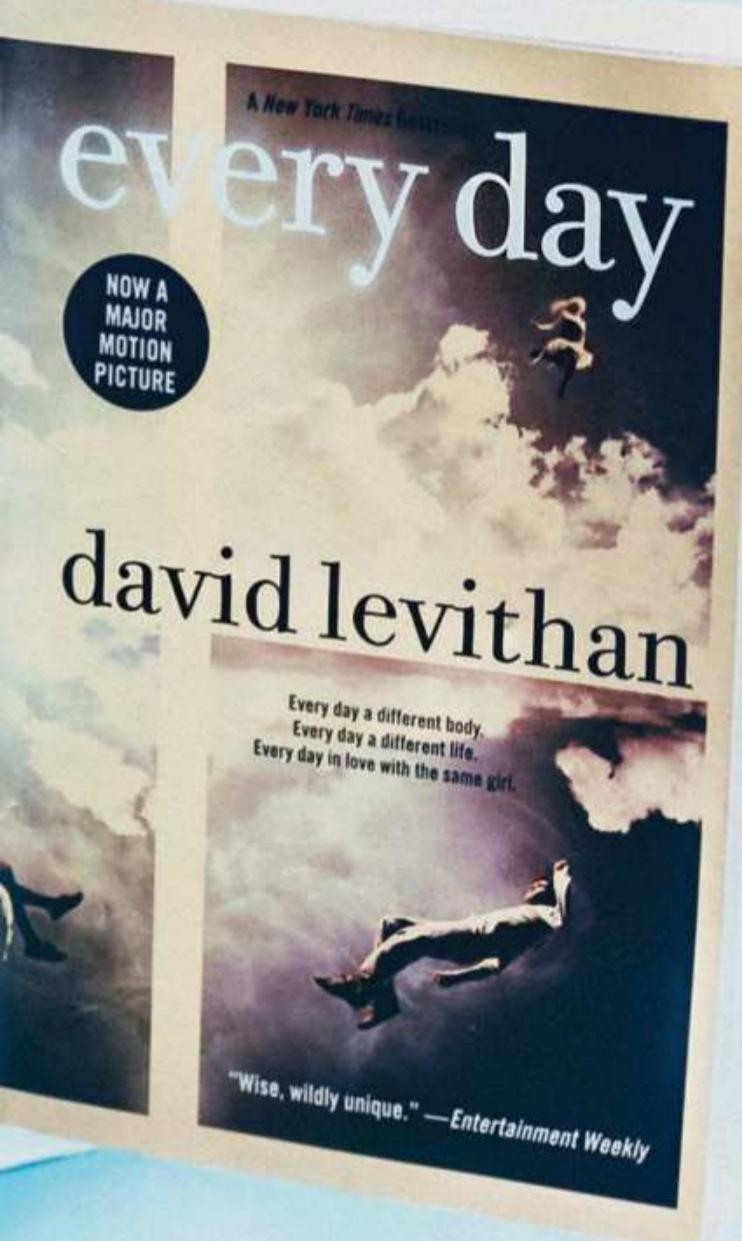
**How I Live Now****BY MEG ROSOFF**

The world is gripped by another global war, and 15-year-old Daisy is sent from her New York home to stay with extended family on a rural farm in the U.K., where she eventually grows close to her relatives. But her life is further upended when the U.K. is invaded by foreign powers and the family is driven apart.

2005

**The Book Thief****BY MARKUS ZUSAK**

Nine-year-old Liesel is taken in by an older German couple when her mother can no longer care for her at the onset of World War II. In Zusak's global best seller, Liesel's passion for books—and stealing them—becomes a distraction from the grim reality of life under the Nazi regime.



## 2005 **Code Talker**

BY JOSEPH BRUCHAC

Bruchac fictionalizes the extraordinary story of the Navajo code talkers of World War II. His narrative follows Navajo Marine Ned Begay as he helps the Allied forces win the war by using his tribal language to send uncrackable messages across battlefields.

## 2005 **Elsewhere**

BY GABRIELLE ZEVIN

After being killed in a hit-and-run, 15-year-old Liz enters a strange and mysterious afterlife. There, she'll age in reverse until she's sent back to earth to be reborn, and along the way grapples with huge questions about humanity, purpose and love.

## 2005 **The Lightning Thief**

BY RICK RIORDAN

Trouble seems to follow Percy Jackson. He finally learns why, after his math teacher morphs into a monster and tries to kill him, and his mother reveals a big secret: Percy is actually a demigod, the son of one of the Greek gods of Olympus.

## 2006 **American Born Chinese**

BY GENE LUEN YANG

Innovative and unsettling, this graphic novel explores Asian-American identity through three very distinct characters, offering a startling portrait of the intersection of identity, racism and anxiety.

## 2006 **Copper Sun**

BY SHARON M. DRAPER

Amani's life is forever changed when her village in Africa is invaded by slave traders. She watches as

her parents and younger brother are brutally murdered, and then is forced onto a ship, taken to South Carolina and sold to a plantation owner. There, she befriends a white indentured servant, and together they attempt to escape.

2006

## **Tyrell**

BY COE BOOTH

Fourteen-year-old Tyrell is living in a Bronx homeless shelter with his mother and little brother—and balancing the pressure of keeping his family afloat with adolescence and all its attendant struggles.

2008

## **Graceling**

BY KRISTIN CASHORE

Most people are scared of Katsa. In her land of the Seven Kingdoms, a rare few are born with special powers known as graces. And Katsa's grace? She's great at killing people. But there's more to Katsa than can be seen by the brutal king she serves.

2008

## **The Hunger Games**

BY SUZANNE COLLINS

Katniss Everdeen, an eagle-eyed archer with an equally keen moral compass, volunteers to take the place of her little sister in their society's annual competition, which pits teenagers against one another in a death match for the entertainment of a debauched ruling class.

2010

## **Ship Breaker**

BY PAOLO BACIGALUPI

In his climate-centric dystopia, Bacigalupi tells the story of Nailer, a teenager who works on a crew scavenging materials from derelict ships on the shores of the now underwater Gulf Coast region—exposing young readers to the importance of environmental stewardship.

2011

## **Akata Witch**

BY NNEDI OKORAFOR

Sunny, an American-born Igbo girl with albinism, now lives in her family's country of origin, Nigeria. She struggles to make sense of herself—especially her magical powers—until she meets a trio of other superpowered outcast adolescents, and they set off on a quest to stop a villainous man who preys on children.

2011

## **Daughter of Smoke and Bone**

BY LAINI TAYLOR

When she's not in class as an art student in Prague, 17-year-old Karou leads a double life running magical errands. But she has long wondered why she feels she was meant for another life—a mystery that begins to unravel when she meets the otherworldly Akiva and he immediately tries to kill her.

2011

## **Legend**

BY MARIE LU

June has trained her entire life to rise in the highest ranks of the Republic, a military dictatorship ruling what once was the western U.S. Day is the Republic's most wanted criminal. The two teens should have nothing in common, but when June's brother is killed and Day becomes the prime suspect, their lives crash together.

2012

## **Aristotle and Dante Discover the Secrets of the Universe**

BY BENJAMIN ALIRE SÁENZ

Lauded for its honest exploration of identity and sexuality, Sáenz's novel centers on the friendship between Aristotle "Ari" Mendoza and Dante Quintana, two Mexican American boys on the cusp of manhood who form a life-changing bond after a chance meeting at an El Paso pool in the summer of 1987.

2012

## **Code Name Verity**

BY ELIZABETH WEIN

When a British spy plane transporting best friends Maddie and Julie crashes in Nazi-occupied France, the two young women are thrown into an increasingly harrowing nightmare that explores the anguish and malevolence of World War II.

2012

## **Every Day**

BY DAVID LEVITHAN

The protagonist, known only as A, wakes up in a different body each morning. Levithan's entirely original romantic fantasy novel follows A into a life-changing moment: one morning, A wakes up in the body of a teenage boy and falls head over heels for the boy's girlfriend, Rhiannon.

2012

**The Fault in Our Stars**

BY JOHN GREEN

The most beloved book from YA giant Green charts the love story of Hazel Grace Lancaster, a 16-year-old with Stage IV thyroid cancer, and Augustus Waters, a 17-year-old in remission from osteosarcoma, after they meet in a cancer support group.

2012

**Me and Earl and the Dying Girl**

BY JESSE ANDREWS

Poignant, honest and heart-wrenching, Andrews' story of a teen who makes a film about his friend who's been diagnosed with leukemia is a tender examination of grief that's also laugh-out-loud funny.

2013

**If You Could Be Mine**

BY SARA FARIZAN

Sahar has been in love with her best friend, Nasrin, since they were kids. Theirs is a sweet affection, despite the dire consequences for a queer couple in Iran. But Sahar's dream of their future is further threatened when Nasrin's family announces her engagement to a man, leading Sahar to consider a drastic change.

2013

**March: Book One**

BY JOHN LEWIS AND ANDREW AYDIN, ILLUSTRATED BY NATE POWELL

As a young activist, the late John Lewis was inspired by the 1957 comic book *Martin Luther King and the Montgomery Story*. Half a century later, the Congressman teamed up with a campaign staffer to collaborate on a graphic-novel trilogy about his own life.

2014

**Brown Girl Dreaming**

BY JACQUELINE WOODSON

Woodson's highly lauded collection of free-verse poems about her childhood in New York and South Carolina offers language simple enough to be accessible to tweens and young teenagers, and more than enough complexity to engage older readers.

2014

**The Crossover**

BY KWAME ALEXANDER

Alexander uses hip-hop rhymes and free-verse poetry to tell the coming-of-age story of Josh Bell, a 12-year-old basketball star living in suburbia and facing growing pains with his dad and twin brother.

2014

**I'll Give You the Sun**

BY JANDY NELSON

Once inseparable, 13-year-old twins Noah and Jude are drifting apart. Their rivalry grows as they apply to the same art school and grapple with their diverging identities. While Noah contends with his love for their neighbor Brian and Jude examines her own sexuality, the book explores themes of jealousy, love and loss.

2014

**Noggin**

BY JOHN COREY WHALEY

An odd premise—boy dies of cancer, has his head frozen and wakes up with it stitched to a new body—gives way to a surprisingly tender and resonant story, as the teen encounters his parents and friends who have spent the past five years grieving his death and trying to move on.

2014

**To All the Boys I've Loved Before**

BY JENNY HAN

When the love letters she wrote to her crushes are mailed out without her knowledge, 16-year-old Lara Jean finds herself in the most unexpected position: entering into a fake relationship with one of the letters' recipients, a swoony lacrosse player, only to catch very real feelings.

2015

**Dumplin'**

BY JULIE MURPHY

Reeling from a terrible loss, Will decides to enter a local beauty pageant as a form of protest. Murphy's coming-of-age novel

**'Young people are asking themselves big questions like, What's the meaning of life?'**

NICOLA YOON



explores how difficult self-love can be, while delivering a sweet romance and an unforgettable heroine.

2015

**An Ember in the Ashes**

BY SABAA TAHIR

In the tyrannical Martial Empire, Laia and her people eke out an existence under a cruel ruling elite. But even those on top, like Elias, the scion of a powerful family, suffer in the brutal society. When their paths fatefully cross, Laia and Elias' story becomes a sweeping saga of love, courage and the search for liberty.

2015

**Everything, Everything**

BY NICOLA YOON

Maddy is a biracial Black and Japanese girl who can't leave her house because of severe combined immunodeficiency; and Olly, enduring an abusive relationship with his father, is the boy who moves in next door. In Yoon's tender love story, the two share an intense desire for freedom.

2015

**March: Book Two**

BY JOHN LEWIS AND ANDREW AYDIN, ILLUSTRATED BY NATE POWELL

The second installment of the graphic-novel trilogy about Lewis'

life in the civil rights movement picks up after the founding of the Student Nonviolent Coordinating Committee in 1960 and ends with the bombing of the 16th Street Baptist Church in Birmingham on Sept. 15, 1963.

2015

**More Happy Than Not**

BY ADAM SILVERA

Sixteen-year-old Aaron Soto has just lost his father, and he's consumed by the tragedy even as he works through surprising new feelings for a boy he's recently met. Determined to shake away the attraction, Aaron looks into a mind-altering experiment that promises to erase painful memories.

2015

**Simon vs. the Homo Sapiens Agenda**

BY BECKY ALBERTALLI

After the flirty emails he's been writing to a male stranger are discovered by a classmate, Simon is desperate to keep his sexuality to himself and becomes the subject of a blackmailing scheme. It's a big stress to balance with his feelings for a new crush, but what ensues is a celebratory story of self-acceptance.



**2015**  
**Six of Crows**  
**BY LEIGH BARDUGO**  
With a collection of complex narrators—a motley crew of criminals on the hunt for a life-changing fortune—Bardugo delves into the gray area between heroes and villains that's often left unexplored in YA fantasy stories.

**2016**  
**Salt to the Sea**  
**BY RUTA SEPETYS**  
Set in the former East Prussia as World War II comes to an end, Sepetys follows Joana, Emilia and Florian as they fight to stay together on a desperate journey to reach western Germany and board a refugee ship that promises to take them away from their crumbling homeland.

**2016**  
**Scythe**  
**BY NEAL SHUSTerman**  
Citra and Rowan are training to become Scythes, trained killers who determine who should be culled from an immortal world, and face forbidden feelings for each other. The leaders of their society decide that only one will be chosen—and whoever it is will be forced to cull the other.

**2016**  
**The Sun Is Also a Star**  
**BY NICOLA YOON**  
Loosely inspired by her romance with husband and fellow novelist David Yoon, Nicola Yoon's swoon-worthy novel brings together two teens in a whirlwind love story that unfolds over the course of a single day in New York City.

**2016**  
**We Are the Ants**  
**BY SHAUN DAVID HUTCHINSON**  
Henry is given an ultimatum by extraterrestrials: save Earth and its inhabitants by merely pressing a large red button—or let everyone perish. Although the decision to rescue humankind may seem like a no-brainer, for Henry, relentlessly bullied at school and grieving a tragic loss, there's some major trepidation.

**2016**  
**When the Moon Was Ours**  
**BY ANNA-MARIE MCLEMORE**  
McLemore captures the intense love of two young outsiders, each with fantastical traits that estrange them from the rest of the world but endear them to each other. Their deep attachment and comfortable social seclusion is challenged when rumored witches plot to steal something precious to them.

**2017**  
**The 57 Bus**  
**BY DASHKA SLATER**  
In 2013, one moment of violence on a bus in Oakland, Calif., forever changed two teenagers' lives. Journalist Slater explores the fallout with nuance and complexity, showing that there's often more to a story than we can see.

**2017**  
**Allegedly**  
**BY TIFFANY D. JACKSON**  
Jackson's novel is positioned as a page-turning thriller, but the gripping story of Mary Addison—convicted at 9 of murdering an infant her mother was babysitting—also grapples with reproductive rights, mental health and racism inside the criminal-justice system.

**2017**  
**American Street**  
**BY IBI ZOBOI**  
Zoboi's coming-of-age tale about a young Haitian woman fending for herself in the U.S.—a strange country, home to family members she barely knows—combines a timeless immigrant story with magical realism and Afro-Caribbean influences.

**2017**  
**Dear Martin**  
**BY NIC STONE**  
In an attempt to process the racial inequities around him—something Stone's novel helps young readers do too—high schooler Justyce McAllister writes letters to Martin Luther King Jr. But no amount of reflection can prepare him for what he'll confront.

**2017**  
**The Hate U Give**  
**BY ANGIE THOMAS**  
Just when it looks like there might be more than friendship between Starr and Khalil—who have drifted apart after a private-school scholarship took Starr out of their poor Black neighborhood—a white cop pulls them over and

**'The function of story, especially for young people, is to bear witness to their lives.'**

JASON REYNOLDS

fatally shoots Khalil. This is the recurring nightmare of our time, and it's only the beginning of Thomas' acclaimed novel, which follows Starr's quest for justice.

**2017**  
**I Am Not Your Perfect Mexican Daughter**  
**BY ERICA L. SÁNCHEZ**  
Julia's older sister was the "perfect" Mexican daughter. But after a tragic accident leads to her death, Julia is left alone with her family, struggling to juggle their expectations with her own grief and mental-health needs.

**2017**  
**Long Way Down**  
**BY JASON REYNOLDS**  
A chilling examination of the repercussions of gun violence, this novel-in-verse follows a 15-year-old after the killing of his brother. Although it's contained in a single elevator ride, the piercing narrative carries the emotional weight of an epic saga.

**2017**  
**The Marrow Thieves**  
**BY CHERIE DIMALINE**  
In a dystopian version of Canada, 16-year-old Frenchie goes on the run when the government starts kidnapping Indigenous people—the only ones who can still dream—and harvesting their bone marrow.

**2017**  
**We Are Okay**  
**BY NINA LACOUR**  
After a terrible loss, Marin flees from San Francisco to New York. Lacour's novel opens four months later with Marin in college, awaiting a visit from her best friend. The problem is, she hasn't spoken to anyone from her old life since the day she left.

**2017**  
**When Dimple Met Rishi**  
**BY SANDHYA MENON**  
Girl-meets-boy gets a charming update in Menon's hilarious romantic novel, which follows a headstrong young Indian girl and the boy her parents want her to marry through an eventful summer at a tech camp.

**2018**  
**The Astonishing Color of After**  
**BY EMILY X.R. PAN**  
When a red bird arrives and speaks her name on the night

before her mother's funeral, 15-year-old Leigh is certain it's her mother reborn. Pan's novel takes off to traverse multiple timelines and tell a story of love, loss and acceptance.

**2018  
Children of Blood and Bone**

**BY TOMI ADEYEMI**

Inspired by West African mythology, Adeyemi's dazzling fantasy debut is an epic adventure tale centered on teenager Zélie Adebola's quest to restore the magic to her kingdom after it has been virtually wiped out by an evil monarch.

**2018  
Darius the Great Is Not Okay**

**BY ADIB KHORRAM**

On his formative first trip to his mother's native country of Iran, teenager Darius Kellner questions what it means to truly belong, in a heartfelt exploration of anxiety, isolation, community and identity.

**'I can't wait to see what they grow up to create themselves that will be world-changing for someone else.'**

ADAM SILVERA

**2018  
The Poet X**

**BY ELIZABETH ACEVEDO**

Xiomara is a Black Latinx 15-year-old with "a little too much body for such a young girl"—and devoutly Catholic parents who are terrified of her burgeoning sexuality. In compact, intense verse, Acevedo tells a distinctly modern coming-of-age story.

**2018  
A Very Large Expanse of Sea**

**BY TAHEREH MAFI**

Shirin, a 16-year-old Iranian American, has spent the year since 9/11 enduring racist and Islamophobic abuse and has withdrawn into herself. But when Ocean, her white lab partner, begins showing interest in getting to know her, Shirin's guard slowly starts to come down.

**2019  
Frankly in Love**

**BY DAVID YOON**

Korean-American high schooler Frank Li has fallen hard for his white classmate, even though his immigrant parents expect he'll date a Korean girl. As he navigates first love, Frank examines the cultures that shape his life.

**2019  
Laura Dean Keeps Breaking Up With Me**

**BY MARIKO TAMAKI, ILLUSTRATED BY ROSEMARY VALERO-O'CONNELL**

Laura Dean is the coolest, prettiest, most popular girl in school, and the day that she became Freddy's girlfriend was the best day of Freddy's life. But Laura Dean is also a terrible girlfriend, and Tamaki explores their toxic relationship in her nuanced graphic novel.

**2019  
Like a Love Story**

**BY ABDI NAZEMIAN**

Three teens living in New York City in 1989 become enmeshed in a messy love triangle. As they struggle to untangle it, they get lessons in queer culture from one of their uncles, who is dying from complications related to AIDS.

**2019**

**Pet**

**BY AKWAEKE EMEZI**

The adults don't want to admit that monsters still live in the city of Lucille, so trans teen Jam and a creature named Pet team up to confront what the grownups can't. Their quest, more than a coming-of-age tale, is an affirmation of trans identity.

**2019  
With the Fire on High**

**BY ELIZABETH ACEVEDO**

Emoni had a baby during her first year of high school. Now a senior, she's balancing her responsibilities as a mother with her dreams of becoming a chef in Acevedo's novel, which deftly rebukes the cliché of the tragic teen mother and uses food to explore culture.

**2020  
The Black Flamingo**

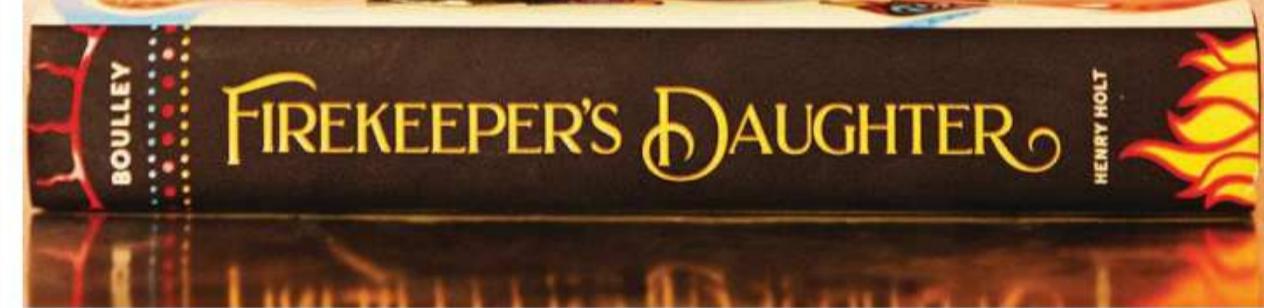
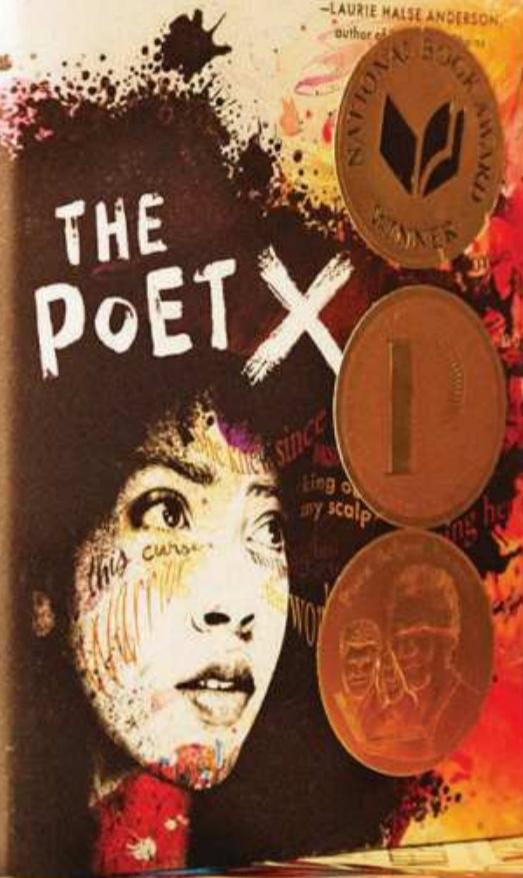
**DEAN ATTA**

Poet and performer Atta's coming-of-age novel follows Michael, a mixed-race gay teen in the U.K.,

**2019**

**The Poet X**

**BY ELIZABETH ACEVEDO**



as he wrestles with his Greek-Cypriot and Jamaican identity, grapples with his sexuality and discovers the power of drag.

**2020  
Felix Ever After**

**BY KACEN CALLENDER**

Felix is proud of who he is, and he's part of a vibrant, supportive community at the arts school he's attending on a scholarship. But when he begins receiving anonymous transphobic messages, he's forced to re-evaluate his friendships.

**2020  
The Henna Wars**

**BY ADIBA JAIGIRDAR**

Sparks fly between two girls running rival henna businesses at a school competition. Their relationship gives way to a rom-com that is refreshingly relatable in its depiction of high school life and that takes on issues surrounding both homophobia and racism.

**2020  
Stamped: Racism, Antiracism, and You**

**BY JASON REYNOLDS**

**AND IBRAM X. KENDI**

Reynolds "remixes" Kendi's acclaimed history of racist ideas in America for a young audience,

translating complex topics into language that speaks directly to kids.

**2020  
We Are Not Free**

**BY TRACI CHEE**

Moving among the voices of 14 Japanese-American teens during World War II, *We Are Not Free* showcases the bonds of a friend group as they navigate the trauma caused by the imprisonment of Japanese Americans.

**2020  
You Should See Me in a Crown**

**BY LEAH JOHNSON**

Liz is the last person who'd run for prom queen. She's always felt like an outsider, as a Black and queer girl at her school. But the prize is the scholarship money she needs to follow her dreams and go to college—and the competition gets extra complicated when Liz falls for a fellow contestant.

**2021  
Firekeeper's Daughter**

**BY ANGELINE BOULLEY**

Part thriller, part romance and part examination of Indigenous identity, Boulley's forceful novel follows a biracial teen navigating family tragedy and an intense criminal investigation.

# TIME



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# RURAL DWELLINGS STAND AS PROUD LEGACIES IN FUJIAN

Ancestral homes of Hakka people fuel tourism influx and improve lives

**BY WANG HAO,  
CAO DESHENG  
and HU MEIDONG**

In valleys filled with thick vegetation, different-sized circular and rectangular buildings with faded yellow clay walls lie scattered in mountainous villages in Longyan, Fujian province.

Surrounded by soaring mountains and rippling streams, the dark-brown wooden roofs of these *tulou* (earthen buildings) in the city's Yongding district look magnificent at sunset.

A type of rural dwelling in Fujian combining accommodations and fortifications, these architectural wonders have attracted increasing attention at home and abroad in recent years. They are arranged so they blend in with their surroundings, providing visitors with breathtaking views, peace and quiet.

There are more than 23,000 *tulou* in Yongding. The buildings became well-known after 46 were given World Heritage status by UNESCO in 2008.

The structures were awarded this status because "they are exceptional examples of a building of tradition and function exemplifying a particular type of communal living and defensive organization, and, in terms of their harmonious relationship with their environment, an outstanding example of human settlement", UNESCO said.

The resulting tourism influx in the area has not only prevented the buildings from falling into disrepair but also bolstered local businesses and allowed the structures to remain functional relics.

Locals said tourism has helped them escape poverty, and is contributing to rural vitalization and better lives as China continues on its journey toward full modernization.

**“WHAT SURPRISED ME MOST IS THAT PEOPLE WERE REALLY INTERESTED IN OUR COMMUNAL LIFESTYLE AS WELL AS OUR HAKKA CULTURE. THEY THOUGHT IT INCREDIBLE THAT SO MANY PEOPLE COULD LIVE TOGETHER IN HARMONY.”**

**LIN RIGENG**, OWNER OF THE ZHENCHENG BUILDING IN HONGKENG VILLAGE, LONGYAN CITY, FUJIAN



Visitors inspect the structure of a *tulou* in Nanjing county, Fujian province.

HU GUANGHE / XINHUA



Tourists photograph *tulou* in Tianluokeng village, Zhangzhou city, Fujian province.  
HU GUANGHE / XINHUA

However, in the early 1980s Yongding was still an area where people had little contact with the outside world, and its *tulou* attracted only a few backpackers.

Lin Rigeng, 71, owner of the Zhencheng Building, a *tulou* in Hongkeng village, said that until the early 1990s there was no road into the village, and few locals had even seen a bicycle.

The Zhencheng Building was built in 1912 by Lin's grandfather, who became a wealthy businessman in Yongding selling tobacco cutters. It took the family nearly five years and a lot of money to complete the design and construction of the four-story building, which consists of 208 rooms around a central courtyard and covers 53,820 sq. ft.

Lin has always lived in the building, which is one of the *tulou* on the World Heritage List.

"It's one of only two structures in China that follow the design of the Eight Diagrams — the other being the Temple of Heaven in Beijing," Lin said. The Eight Diagrams symbolize eight natural phenomena: the sky, earth, thunder, wind, water, fire, mountains and lakes, and they represent early knowledge of the universe in ancient China.

The giant multi-storied *tulou* were built with wood and fortified with mud walls. Constructed from the 15th to 20th centuries, these massive communal homes were sited based on feng shui principles, which claims to use energy forces to harmonize individuals with their environment. The *tulou* are also purposefully nestled amid tea, tobacco and rice plantations and abundant forests of pine and bamboo.

Throughout history, *tulou* residents have mostly been Hakka — migrants in southern China who originated from lands adjoining the Yellow River. Population pressures created conflict between



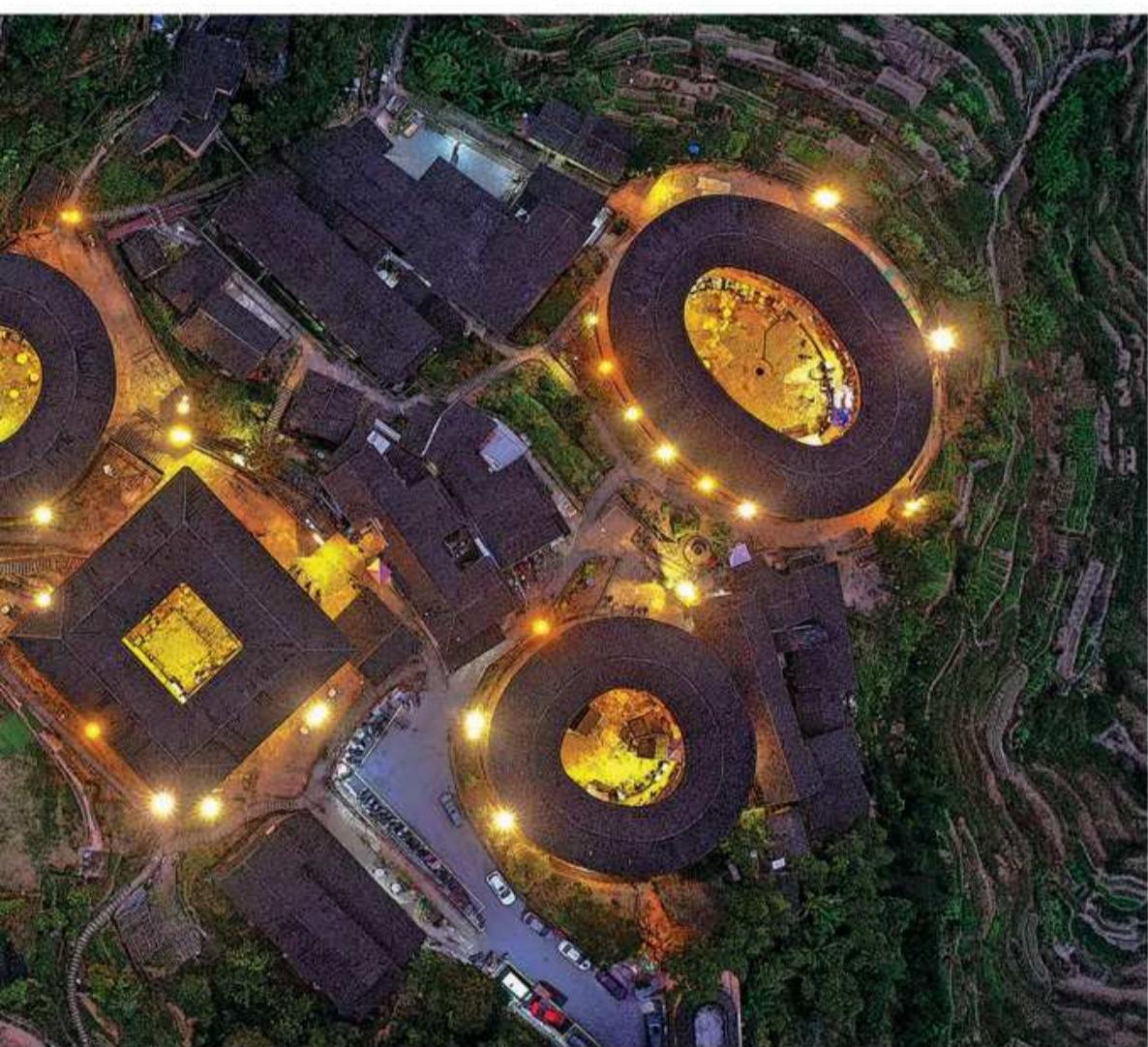
the Hakka and their neighbors, so they built their homes to double as fortifications.

The buildings are mainly four or five stories high. The first floor serves as the kitchen, the second is used for grain storage and the upper floors act as living areas.

The structures are mainly symmetrical, and their defensive features include ironclad gates, escape tunnels, slits for weapons under the dark-tiled roofs, and a water well. Because of their defensive function, only rooms on the third floor and higher have windows, which are very small. With sufficient food, the residents could survive in



A *tulou* in suburban Zhangzhou city, which used to be isolated from the outside world, is now a popular tourist attraction in Fujian province. PROVIDED TO CHINA DAILY



An aerial view of *tulou* in Nanjing county, Fujian province. HUANG WENPENG / FOR CHINA DAILY

the event of a lengthy conflict.

Despite being similar in design, each *tulou* is unique. Every structure essentially doubles as a self-contained village. While the *tulou* are now open to the public, some are still occupied by residents, most of them from the same clan.

Communal living is integral to these villages, where the closed-wall design fosters social interaction. Although individual families have their own areas in *tulou*, residents gather in the courtyard for ceremonies such as ancestor worship and weddings.

Due to rapid economic growth, locals' livelihoods have greatly

improved and many of them have bought modern homes in neighboring cities, resulting in a significant decline of *tulou* occupants in the past two decades.

For the locals who grew up in *tulou*, the structures are just normal houses, but through his conversations with visitors, Lin came to realize that each of the structures is an extraordinary piece of architecture.

"What surprised me most is that people were really interested in our communal lifestyle as well as our Hakka culture," he said. "They thought it incredible that so many people could live together in harmony."

## All ablaze in a glaze of glory

BY WANG KAIHAO

What are the colors of the Forbidden City in Beijing? Red and yellow? Yes, but not completely, if you are observant enough.

Thanks to the glaze called *liuli* that decorates the doors, roofs and walls, more colors are visible in the Forbidden City, China's former imperial palace, also known as the Palace Museum.

"Glaze is the best reflection of colors in Chinese architecture and is an indicator of the high status of a construction," says Zhang Tong, a curator of an online exhibition titled *Colored Glaze of the Imperial Palace* on the museum's official website. "It shows wisdom mixing handicraft and art."

Glaze is a type of ceramic that is produced using certain formulae and is burned in kilns to create an appearance resembling glass.

At the Forbidden City the glaze work is mainly in green, yellow, blue and black, but white can also be seen. Other than roof decorations, gates are the main location in which glaze is used.

In the compound, there are 134 gates decorated with glaze, Zhang says.

"The Forbidden City marks an apex of glaze in China after thousands of years of development," says Wang Jianguo, an academician at the Chinese Academy of Engineering.

"Glaze represents a grand and splendid aura in Chinese art. It was worshipped in ancient China as a symbol of

nobility, like jade."

The earliest glaze found in China dates to the Western Zhou Dynasty (c. 11th century-771 B.C.), which was unearthed in 1975 from a noble's tomb, Wang says.

Ancient documents show it was first used in architecture during the Southern and Northern Dynasties (420-581), also proved by archaeological discoveries of glaze tiles from the ruins of a capital city from that period.

During the Song Dynasty (960-1279), construction components made of glaze became popular, and glaze bricks and walls appeared.

"People used glaze to mimic wooden structure," Wang says. "It expanded to more occasions, from palaces and nobles' dwellings to temples and public buildings in the countryside during the Yuan Dynasty (1271-1368)."

That practice remained at the Forbidden City as the glazed gates were designed to imitate patterns of wooden works.

Images on wooden beams can be added by paint, but to create similar patterns, different effects of glaze can only be realized through raw materials and very high temperatures. Researchers can now analyze which specific chemical composition creates glaze pieces in certain colors, but the ancient artisans relied solely on experience. Sometimes, they even had to taste the raw material to make the right choice.

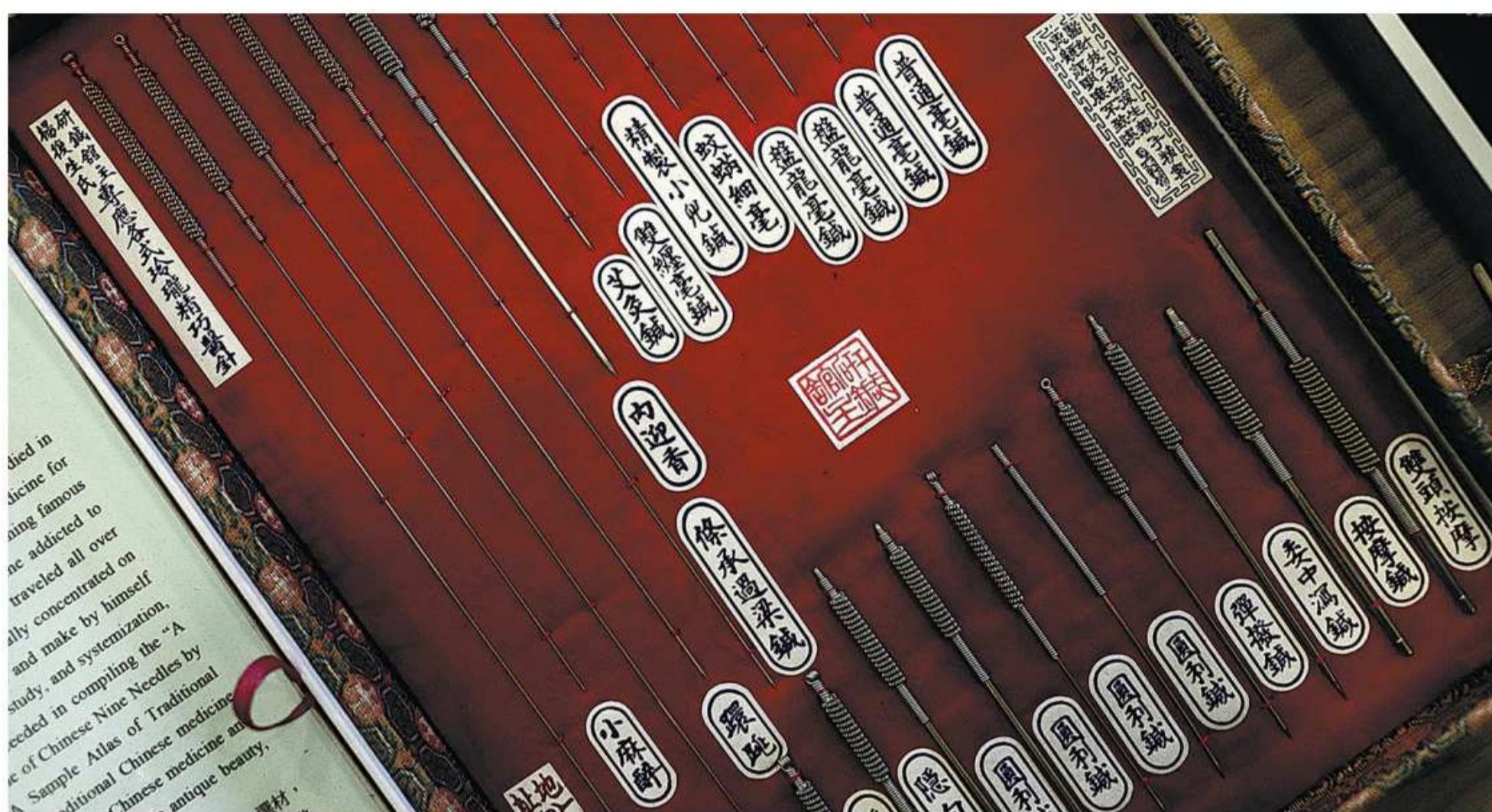


Glazed decorations in the Forbidden City reflect the intricate beauty of ancient Chinese architecture. PROVIDED TO CHINA DAILY

# CHINA WATCH

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Left: Acupuncture needles on display at a TCM training center in Sao Paulo, Brazil. XINHUA

Above: Foreign medical students at Xi'an Jiaotong University, Shaanxi province, practice Chinese massage.

YUAN JINGZHI / FOR CHINA DAILY

## YIN, YANG and the wonders of TCM

World experiences  
benefits of ancient  
form of medicine

BY ZHAO RUINAN

When Arvin Kuipers asks his patients to stick out their tongue so he can diagnose their ailments, many are confused.

Kuipers, 30, who practices traditional Chinese medicine in Amsterdam in the Netherlands, said: "In TCM I need to do face and tongue diagnosis. That's strange for people in my country. They ask me, 'What are you doing?'"

Diagnostic methods for TCM are so different from those used in Western medicine that many people in the Netherlands and other countries can have difficulty understanding what is happening.

One elderly woman had been visiting Kuipers occasionally for consultation, but her first encounter with TCM surprised her.

"She had never experienced acupuncture or any other TCM treatment. She came in, and I examined her face and tongue,"

said Kuipers, who graduated from Beijing University of Chinese Medicine in 2017 and loves Chinese culture. "I told the patient her kidneys were not doing well and that she wasn't getting proper sleep."

The woman was shocked by his insight and asked if he had been spying on her.

"Actually, it was easy to diagnose her condition when I saw the dark rings under her eyes. Her energy levels were also very low at the time."

Kuipers opened his TCM clinic in September. Most of his work involves performing acupuncture, cupping and *tuina*, TCM massage that patients in the West like the most, he said. In some cases he also prescribes traditional herbal medicines.

Kuipers usually makes a cup of Chinese tea to calm his patients if they are nervous about the acupuncture needles. He also explains to them the meridian system, which is a central concept of TCM, yin and yang, and other concepts.

In TCM, good health requires balanced yin and yang, so practitioners not only pay attention

**“TCM DOES WORK, AND WORKS WELL. MY PATIENTS REALLY FEEL BETTER WITH IT, SO I VALUE IT, AND WHEN MY PATIENTS FEEL BETTER I ALSO FEEL BETTER.”**



ARVIN KUIPERS,  
PRACTITIONER OF TCM IN AMSTERDAM

to a patient's ailment, but also to his or her overall physical condition, Kuipers said. TCM is also a different culture and offers a new perspective, instead of being a curing method, he said.

As of early April, Kuipers had treated more than 200 patients, many of whom come to his clinic every week.

"TCM does work, and works well. My patients really feel better with it, so I value it, and when my patients feel better I also feel better."

The practice of TCM has gained a great deal of acceptance worldwide in recent decades.

According to a XinhuaNet report, more than 13,000 foreigners go to China to learn the ancient form of medicine every year.

On June 7 a report from the National People's Congress Standing Committee said TCM had been introduced to 196 countries and regions, with more than 30 TCM centers being established overseas.

Pan Ping, director of the academic department at the World Federation of Chinese Medicine Societies, said TCM has become increasingly popular abroad in the five years since the first overseas TCM center was built. By the end of last year more than 1 million foreigners had received treatment at such centers, he said.

Most of the centers are in countries and regions that are home to many people of Chinese descent, including in Europe, Southeast Asia and the United States, Pan said.

"In recent decades, internationalization of TCM has accelerated," Pan said.

This progress was illustrated by the purple cupping circles on the back of swimmer Michael Phelps during the Olympic Games in Rio de Janeiro in 2016.

"But there is still a long way to go. Standardization is the key to going abroad, including standards for diagnosis and treatment, as well as medicine placement and processing," Pan added.

# REVIVAL IN THE WILD

Drive to protect flora  
and fauna given  
a smart edge

BY HOU LIQIANG

Peng Yu's early days of working at the Mengda National Natural Reserve left many bitter memories.

Fifteen years ago it was no surprise that in Peng's daily routine of monitoring and caring for various species she wore out at least three pairs of shoes a year, especially as she sometimes lost her way after darkness enveloped the 42,725-acre reserve.

Recently, though, the 41-year-old's job has become much easier because China is moving ahead with building a national biodiversity network that features many smart devices and facilities.

Tramping across the reserve's rugged terrain at an average altitude of more than 9,186 ft. in Xunhua Salar autonomous county, Qinghai province, is not easy.

Peng's work can take her anywhere, through thick bushes and tall plants, and in a reserve as big as Mengda it is easy for staff to lose their bearings.

In May 2008 Peng's team failed to find its way back to its office until 9 p.m., and one of her workmates almost fell off the edge of a cliff because of the low light and the dense greenery.

The daily routine became even more challenging when the plants became riddled with pests. Some rangers had to walk around the reserve carrying 44-pound sprayers containing pesticide.



From left: A male Przewalski's gazelle in Haiyan county, Qinghai. A cormorant about to catch a fish in the Buha River in Gangcha county, Qinghai.

PHOTOS BY GE YUXIU / FOR CHINA DAILY

## 18%

of China's land has been designated as protected areas according to the Ministry of Ecology and Environment

Her office illustrated the spartan conditions. "I had almost nothing but a desk," Peng said.

Now, working conditions in the reserve are changing dramatically as China bolsters efforts to improve conservation of biodiversity. Although Peng and her colleagues still have to patrol the reserve to conduct routine observations and surveys, the frequency of the treks has fallen as a result of the use of smart equipment.

In addition to three drones used especially for monitoring, the protected area now has 46 sets of infrared cameras, the management office says.

The rangers are also spared the effort of carrying the sprayers because drones are now used to spray the reserve with pesticide.

Peng has also seen the number of team members rise as the country attaches increasing importance to biodiversity. When she started working at the reserve in 2006 only five technicians were employed to oversee species protection efforts; now there are 18.

The reserve is just a microcosm of the increasingly stronger ecosystem monitoring capabilities in Qinghai and across the country as a whole.

Ren Yong, head of ecosystem protection at the Qinghai Department of Ecology and Environment, said the province has established a monitoring system that covers all the areas under its jurisdiction.

While the province uses remote sensing methods to monitor different types of ecosystems, such as high-altitude grassy marshland and prairies, the authorities responsible for protecting the land also monitor specific species, he said.

"Generally speaking, the province has established a system

that consists of both micro- and niche-targeted monitoring," Ren said, adding that the authorities often use field monitoring equipment to assess problems unearthed by remote sensing.

The Ministry of Ecology and Environment says 18% of China's land has been designated as protected areas. That has provided effective protection for 90% of all land ecosystems and 85% of key wild animal populations.

The ministry has also been promoting construction of a national network to monitor biodiversity conservation.

In January Cui Shuhong, director-general of the nature and eco-conservation department at the ministry, said that from 2015 to last year the government had spent 400 million yuan (\$62 million) in biodiversity surveys and assessments, and building a national biodiversity observation network.

Thanks to the efforts over five years, a preliminary monitoring network for biodiversity has been established, Cui said. The 749 sample observation areas across the country allow the network to provide more than 700,000 pieces of data every year, he said.

Xin Changxing, governor of Qinghai, said on June 5 that the number of Przewalski's gazelle in the province, a species of antelope listed as endangered, has risen from about 300 at the end of the last century to 2,700 now.

The growth in numbers of Tibetan antelopes has been even more impressive.

"From a record low of less than 20,000, the number in Qinghai alone has now reached more than 70,000," Xin said.



A herd of kiangs passes through an area near the Kunlun Mountains in Qinghai.

# 6 Questions

**Billie Jean King** The tennis legend on athletes' struggles with mental health, the fight for equal pay and her new memoir, *All In*

**In your book, you write, "Even if you're not a born activist, life can damn sure make you one." How did you come to this conclusion?** When I was 12 years old, I had my epiphany. I had started playing tournaments to get rankings in Southern California. Everybody who played wore white shoes and white socks, white clothes, played with white balls, and everybody that played was white. And I remember saying, "Where's everybody else?" I just knew if I ever could become No. 1, I would champion equality the rest of my life. But I knew I had to probably be No. 1, because I knew already at 12 years old that I was a second-class citizen, and I'm white! I knew my sisters of color had it tougher, I knew that others had it tougher, people living with disabilities.

**You wrote about how Black tennis star Althea Gibson helped shape the way you saw your future. Your path has provided a way for many young people to see themselves. What do you think the importance of visibility is?** I think you have a chance to make a bigger impact, because you're reaching more people. I think people have to realize that if you hear our stories—women's stories, Black stories, brown stories—when you start to hear stories of people as human beings, not that they had a good forehand or backhand, that's what's interesting to people.

**As a pioneer in women's professional sports, you often received backlash for speaking out. What do you think of athletes using their platforms to promote social change?** It's always good to hear people and their opinions. You don't have to agree with them, but it makes you think, or maybe it's a wake-up call and you didn't realize it. With it, though, there's a responsibility. If you look at the history of how pro tennis started in '68 and how women were getting shut out, we signed this \$1 contract that is the birth of women's professional

tennis the way you know it today. We were all very young at the time, and we decided that we were willing to give up our careers, we were willing to give up everything for the future generations.

**It does feel like a very different time now when athletes might be overexposed. I'm thinking specifically about Naomi Osaka, who recently declined to do media because of her mental health.**

I know it's difficult, but I think we need to do a better job of having a rookie school, because I think if you choose to be a professional athlete, that doesn't mean you just hit tennis balls. I mean, you're going to have to talk to somebody sometime.

**Mental health is definitely at the forefront of conversation right now. What do you think is the best way to ensure that mental health is taken seriously?** I think they need to take care of themselves first. I hope they get help. I think one of the challenges for people in general is that we have trouble asking for help when we need it the most, and then we feel isolated and alone.

**What does it feel like to see the work that still needs to be done when it comes to pay equity?** For me, it's not even close yet. And I'm so frustrated, because I'm really running out of time.

**What do you think needs to happen so we can actually achieve pay equity now for sports, but also in general?** Sports are a microcosm of society. Let me ask you, do women writers make as much as male writers?

**Well, personally, I've been meaning to ask for a raise.** Girls are taught not to do that. Go for it—at least you've been asking. My generation never asked, but you know what? Women want the cake and the icing and the cherry on top, just like everybody else, and we have to go for it. —CODY LANG



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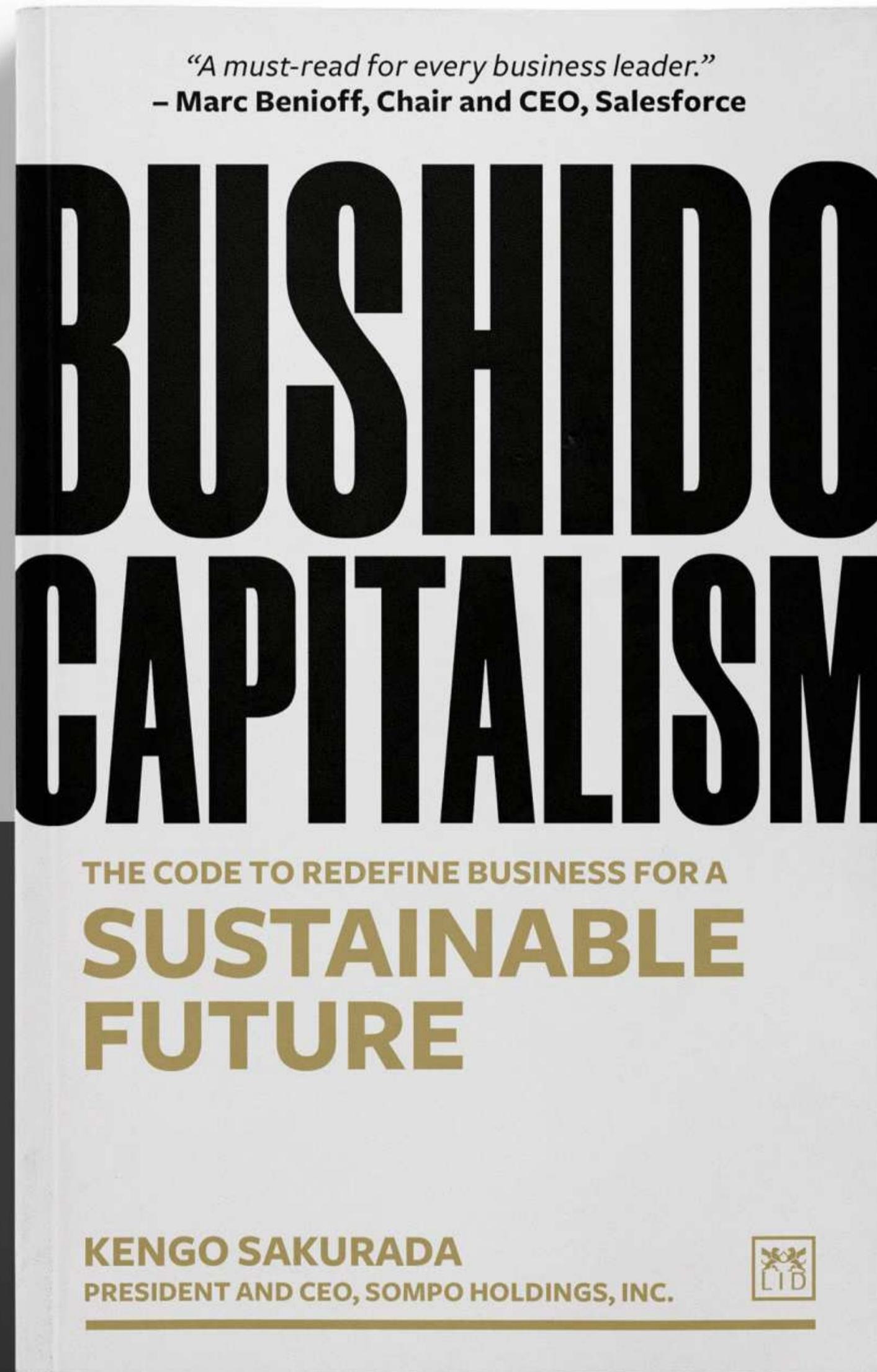
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